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Some legal aspects of sustainable development : some problems of implementing the Biodiversity, Climate Change and related Conventions in Thailand.

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SOME LEGAL ASPECTS OF SUSTAINABLE DEVELOPMENT : PROBLEMS OF IMPLEMENTING THE BIODIVERSITY, CLIMATE CHANGE AND RELATED CONVENTIONS IN THAILAND

By

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Submitted in candidature for the Degree of Doctor of Philosophy

at the University of London King's College

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Abstract of Thesis

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Title of thesis Some Legal Aspects of Sustainable Development Problems of Implementing the Biodiversity, Climate Change and Related Conventions in Thailand

Degree PhD

The purpose of this thesis is to look at problems concerning implementation of the concept of sustainable development from the perspectives of developing countries, using Thailand as a case study The thesis examines some of the legal aspects attached to the concept of sustainable development which has played an important role in the development of international environmental law since the UN Conference on the Human Environment in 1972, and which has significantly been reinforced since the World Commission on Environment and Development (WCED)'s Report in 1987 and the UN Conference on Environment and Development (UNCED) in 1992 It discusses the legal status of various principles inherent in the concept, such as the principles of precaution, polluter pays, intergenerational equity, common concern, public participation and common but differentiated responsibilities It also considers the emerging rights associated with the concept, namely the right to development and the right to a decent environment Due to the vastness of the subject of international environmental law, the research is focused on implementing the Climate Change, Biodiversity and related Conventions in Thailand In doing so, backgrounds and analysis of the current international developments in the areas of air pollution control and the conservation of biodiversity are provided The environmental problems in these areas in Thailand are then examined, followed by an analysis and evaluation of the legal framework, as well as existing national legislation in the two areas In addition, attempts are made to explore the role and the potential of the Association of Southeast Asian Nations (ASEAN) in tackling environmental problems on a regional basis The EU is used as a model for this purpose

It is found that although, based on the principle of common but differentiated responsibilities, developed countries accept obligations to provide financial resources and transfer technology in order to help developing countries implement their obligations as required by the Climate Change, Biodiversity and other related Conventions, problems remain with respect to the amount of financial resources required to be committed by the former Insistence on commitment of "adequate financial resources" on the part of developing countries as a precondition for fulfillment of their environmental obligations would lead to undesirable consequences to the detriment of the global environment affecting all irrespective of national boundaries Thus more sacrifices are needed from both developed and developing countries As far as implementing sustainable development in Thailand is concerned, there has certainly been more environmental awareness in the period following UNCED and most needed legislation is in place The main problems are ensuring effective law enforcement and more public participation especially as far as forest management is concerned At the regional level, ASEAN possesses potential as a forum for regional environmental co-operation but its role in this regard has so far been limited due to lack of resources and political will It is highly debatable whether the EU can provide a model of regional approach to environmental regulation for other regional groupings of developing countries, such as ASEAN

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CONTENTS

ABBREVIATIONS

AC	Appeal Cases
AJIL	American Journal of International Law
Annu Rev Energ Env.	Annual Review of Energy and Environment
APEC	Asia and Pacific Economic Co-operation
AUJILP	American University Journal of International Law and Policy
ASEAN	Association of Southeast Asian Nations
BFSP	British and Foreign State Papers
BNA	Bureau of National Affairs (Washington)
Boston CICLJ	Boston College International and Comparative Law Journal
BOI	Board of Investment
Cal WILJ	California Western International Law Journal
CBD	Convention on Biological Diversity
CERD	Charter of Economic Rights and Duties
CFC	Chlorofluorocarbon
Colorado JIELP	Colorado Journal of International Environmental Law and Policy
CMLR	Common Market Law Review
Cornell ILJ	Cornell International Law Journal
Denver JILP	Denver Journal of International Law and Policy
DIW	Department of Industrial Works
EC	European Community
ECJ	European Court of Justice
ECR	European Court of Justice Report
EEL Rev	European Environmental Law Review
EIPR	European Intellectual Property Law Review
ELR	European Law Review
ELQ	Ecology Law Quarterly
Envt'l L. Rep	Environmental Law Reporter
EP	European Parliament
EPL	Environmental Policy and Law
EU	European Union
FAO	Food and Agricultural Organization
FCCC	Framework Convention on Climate Change
GEF	Global Environment Facility
Georgia JICL	Georgia Journal of International and Comparative Law
Geo. LJ	Georgetown Law Journal
Geo. Wash JILE	George Washington Journal of International Law and Economics
GYIL	German Yearbook of International Law
GHG	Greenhouse gas
Hague YIL	Hague Yearbook of International Law
Harv. ELR	Harvard Environmental Law Review
Harv ILJ	Harvard International Law Journal
Hastings ICLR	Hastings International and Comparative Law Review
ICJ Rep.	International Court of Justice Reports

ICLQ	International and Comparative Law Quarterly
IEAT	Industrial Estate Authority of Thailand
IGY	International Geneva Yearbook
IIC	International Review of Industrial Property and Copyright Law
IJECL	International Journal of Estuarine and Coastal Law
ILA	International Law Association
ILM	International Legal Materials
ILR	International Law Reports
INC	Intergovernmental Negotiating Committee
Int'l Envl. Rep.	International Environmental Reporter
IPCC	Intergovernmental Panel on Climate Change
IRLR	Industrial Relations Law Reports
IUCN	International Union for the Conservation of Nature
JEL	Journal of Environmental Law
J. Int'l Aff	Journal of International Affairs
JLS	Journal of Law and Society
J. Marshall LR	John Marshall Law Review
JPEL	Journal of Planning and Environment Law
JWT	Journal of World Trade
LOSB	Law of the Sea Bulletin
Mich. JIL	Michigan Journal of International Law
MOI	Ministry of Industry
MOSTE	Ministry of Science, Technology and Environment
NEB	National Environment Board
NEQA	The Enhancement of Environmental Quality Act
NESDB	National Economic and Social Development Board
NESDP	National Economic and Social Development Plan
NIEO	New International Economic Order
NILR	Netherlands International Law Review
Nord JIL	Nordic Journal of International Law
NRJ	Natural Resources Journal
NYUJILP	New York University Journal of International Law and Politics
OEPP	Office of Environmental Policy and Planning
OJ	Official Journal of the European Community
Pace LR	Pace Law Review
PCIJ	Permanent Court of International Justice Reports
PPP	Polluter Pays Principle
RECIEL	Review of European Community and International Environmental Law
RFD	Royal Forest Department
SCal LR	Southern California Law Review
SEA	Single European Act
Stanford JIL	Standford Journal of International Law
Suffolk TLJ	Suffolk Transnational Law Journal
TDRI	Thailand Development Research Institute
TEI	Thailand Environment Institute
TEU	Treaty on the European Union

Texas ILJ	Texas International Law Journal
UBCLR	University of British Columbia Law Review
UKTS	United Kingdom Treaty Series
UNEP	United Nations Environment Programme
UNDP	United Nations Development Programme
UNGAOR	United Nations General Assembly Official Records
UNTS	United Nations Treaty Series
Vand.JTL	Vanderbilt Journal of Transnational Law
Windsor Yb.Acc J.	Windsor Yearbook of Access to Justice
WCED	World Commission on Environment and Development
WCN	World Charter for Nature
WLR	Weekly Law Reports
WRI	World Resources Institute
WWF	Worldwide Fund for Nature
Yale LJ	Yale Law Journal
YIEL	Yearbook of International Environmental Law
Yb.ILC	Yearbook of International Law Commission
YUN	Yearbook of United Nations
ZAORV	Zeitschrift fur Auslandisches und Offentliches Recht und Volkerrecht

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1911 Treaty for the Preservation and Protection of Fur Seals, 104 **BFSP** 175

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CHAPTER 1

INTRODUCTION

The concept of "sustainable development" as yet lacks any clearly defined meaning, it is open to a wide range of interpretations varying according to the interest of the group identifying itself with the concept. Although its origins can be traced to many instruments preceding 1987, it has gained a degree of public currency with the release of the 1987 report of the World Commission on Environment and Development (WCED), **Our Common Future** (the Brundtland Report).[1] The Commission pointed out that although past economic development has led to some progress, such as increased life expectancy, literacy and food production, there are obvious signs that the economic system is working against the ecological system. Environmental and developmental mismanagement has led to droughts and floods. Overuse of natural resources has, among other things, brought about an increasing rate of deforestation and each year another six million hectares of productive dryland turn into desert Some plant and animal species are disappearing. The growth in fossil fuel use produces carbon dioxide which may lead to global warming and climate change Other industrial gases threaten to deplete the planet's protective ozone shield Some associated problems include soil erosion, acidification of the environment, the adverse effects of many new chemicals and new forms of waste generated by agricultural, industrial, energy, forestry and transportation policies and practices [2] In the light of the growing awareness of this link between environmental stresses and patterns of economic development, the Commission called for new approaches to environment and development

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[1] World Commission on Environment and Development, **Our Common Future**, Oxford University Press, 1987 See P. Sands, **Principles of International Environmental Law**, Vol I, Manchester University Press, Manchester, 1994, pp 13 ff, 198 ff, 284 ff

[2] *Ibid*, pp 1-23

1. The concept of sustainable development : its origins and development

The concept of sustainable development is inherently ambiguous It implies achieving a balance between environment and development in a form of continued growth which will consume far less energy and raw materials and entail more equity in the distribution of resources among nations. Nevertheless, the WCED defined the concept only as development which "meets the need of the present without compromising the ability of future generations to meet their own needs" [3] This hardly provides a clear perception of the concept. A more comprehensive view is taken by other writers who suggest that several characteristics can be attributed to "development" and the term has a wider meaning than simply economic growth This view has been well articulated by Pearce and others who suggest that :

> *The use of the term "development", rather than "economic growth", implies acceptance of the limitations of the use of measures such as gross national product (GNP) to measure the well-being of nations. Instead development embraces wider concerns of the quality of life - educational attainment, nutritional status, access to basic freedoms and spiritual welfare. The emphasis on sustainability suggests that what is needed is a policy effort aimed at making these developmental achievements last well into the future* [4]

The same authors consider that development is a value word implying change that is desirable, and that, therefore, it can be taken to be a vector of desirable social objectives or a list of attributes which society seeks to achieve or maximize These attributes include increases in real income *per capita*, improvements in health and nutritional status, educational achievement, access to resources, a "fairer" distribution of income and increases in basic freedoms.[5] Sustainable development can then be defined as "a situation in which the vector of desirable social objectives does not decrease over time".[6] The key necessary condition is "constancy of the natural capital stock" or "non-negative change" in the stock of natural resources and

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[3] *Ibid* , p 8

[4] D Pearce, E. Barbier and A Markandya, **Sustainable Development, Economics And Environment In The Third World**, Earthscan Publications Ltd , London, 1990, p 1

[5] *Ibid* , p 2

[6] *Ibid* , p 3

environmental quality They conclude that though the environment should not be degraded further, improvements would be welcome [7]

Although the concept of sustainable development has become widely known as a result of the Brundtland Report, international recognition of the need for integration of economic and environmental concerns predated the Commission's work.[8] It has long been obvious to the international community that over-development in some countries has resulted in environmental degradation while in others underdevelopment has caused environmental decline. The General Assembly Resolution convening the 1972 Conference on the Human Environment (UNCHE) recognised "an urgent need for intensified action at national and international level, to limit, and where possible, to eliminate the impairment of the human environment";[9] and that this was necessary for sound economic and social development. Further, a study sponsored by the Preparatory Commission for the UNCHE on environment and development was undertaken by a panel of twenty-seven experts in economics, development planning, banking, social research , and ecology which met at Founex, Switzerland, in June 1971 The panel concluded that "the kind of environmental problems that are of importance in developing countries are those that can be overcome by the process of development itself".[10] The Founex Report helped to alleviate some of the developing countries' concern that the Stockholm Conference

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[7] *Ibid* , p 4

[8] See L K Caldwell, **International Environmental Policy, Emergence and Dimensions**, 2nd edition, Duke University Press, Durham and London, 1990, pp 197-204, for the recognition of the need to reconcile the goals of development and environmental quality both before and after the 1972 Stockholm Conference. The earlier term used was the ecodevelopment concept, but this did not appeal much to governments probably because it was thought to imply a subordination of development to environment

[9] UNGA Res 2398 (XXIII) of 3 December, 1968, 22 YUN (1968) 476, UNGA Res 2581 (XXIV) of 15 December, 1969, 23 YUN (1969) 392

[10] *Development and Environment Report and Working Papers of a Panel of Experts Convened by the Secretary-General of the United Nations Conference on the Human Environment*, held at Founex, Switzerland, 4-12 June 1971 (Paris, 1972), cited in Caldwell, *op cit* , p 52

might produce regulations which constrained their developmental aspirations [11]

In 1972, the UNCHE Declaration[12] provided in its Principle 13 that :

> *In order to achieve a more rational management of resources and thus to improve the environment, States should adopt an integrated and co-ordinated approach to their development planning so as to ensure that development is compatible with the need to protect and improve the human environment for the benefit of their population*

Apart from Principle 13, a number of the other UNCHE Principles implicitly provide for the need to integrate environment and development. These include responsibility to protect and improve the environment for present and future generations (Principle 1), safeguarding the natural resources of the earth for the benefit of present and future generations through careful planning and management (Principle 2); recognizing the importance of nature conservation, including wildlife, in planning for economic development (Principle 4); and recognizing the importance of economic and social development for ensuring a favourable living and working environment (Principle 8). However, it is fair to say that the statement made by the Stockholm Declaration concerning the linkage between environment and development is rather general and thus had little immediate impact. Moreover, the economic and political implications of restricting developmental activities have made it difficult for the principles to be implemented in practice especially among the developing countries whose incomes have been and are declining.[13] As has been observed, " all too little progress (has been) made toward actual integration of environmental dimensions into development policies and practices".[14]

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[11] P W. Birnie and A E Boyle, **International Law and the Environment**, Clarendon Press, Oxford, 1992, p 40

[12] UN Doc A/CONF 48/14, 16 June 1972, reprinted in 11 ILM (1972) 1416

[13] Birnie and Boyle, *supra*, note 11, p 3

[14] Observation by Maurice F Strong, Secretary-General, United Nations Conference on Environment and Development, cited in *From Stockholm to Rio . A Journey Down a Generation*, **An Earth Summit Publication : Number One**, 1991, at p 2

Nevertheless, some development in the 1980's showed growing recognition of the concept of sustainable development. In March 1980, the World Conservation Strategy was adopted [15] It proposed various strategies for maintaining essential ecological processes and life-support systems, such as soil regeneration and protection, the recycling of nutrients and the cleansing of waters, in order to preserve the genetic diversity on which depends the functioning of many of the above processes, and ensure the sustainable use of species and ecosystems, notably fish and other wildlife, forests and grazing lands

IUCN also played a major role in the drafting of the World Charter for Nature (WCN) subsequently adopted and proclaimed by the United Nations General Assembly in its Resolution 37/7 of 28 October 1982.[16] The provisions of the Charter were stated in the imperative and mandatory language of "shall". However, the legal status of the Charter must be assessed by the same test as other UN Resolutions and it is difficult to argue that it has any binding status for the purpose of conservation of natural resources [17] The mere record of voting on the Charter provides no adequate indication of the actual position of the member states.[18] However, despite the "unrealistic" language of the Charter, it can be regarded "as an important symbolic expression of an intent among nations to achieve a more harmonious and sustainable

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[15] The Strategy was drawn up by the International Union for Conservation of Nature (IUCN) It was commissioned by UNEP and financed by the World Wildlife Fund (WWF) The document has now been revised and published as **Caring for the Earth :A Strategy for Sustainable Living** (D Munro and M Holdgate eds 1991) to take account especially of the need for sustainable development

[16] UNGA Res 37/7, 36 **YUN** (1982) 1024, reprinted in 22 **ILM** (1983) 455, 10 **EPL** (1983) p 30 The Charter was adopted by a vote of 111 in favour, 1 against (USA) and 18 abstentions

[17] Birnie and Boyle, *supra*, note 11, p 431 See also H W Wood, *The United Nations World Charter for Nature : The Developing Nations' Initiative to Establish Protections for the Environment*, 12 **ELQ** (1985) p 977, where the author says that even though the Charter's recommendations are unenforceable general principles, the primary value of the Charter may be to prompt governments to address neglected environmental problems

[18] See Caldwell, *supra*, note 8, p 91, it is observed that most states saw that the resolution would impose no obligations upon them and its implementation need not be taken seriously

relationship between humanity and the rest of the biosphere - between mankind and earth".[19] The concept of sustainable development underlies a number of principles in this Charter. Among these are management of ecosystems and organisms in such a way as to achieve and maintain optimum sustainable productivity (Article 4), integrating the conservation of nature in the planning and implementation of social and economic development activities (Article 7); restraint in the use of natural resources through, e.g. not exceeding their natural capacity for regeneration, safeguarding long-term fertility of soils, and reuse or recycling of resources, including water (Article 10)

Thus, the concept of sustainable development had been developing before the WCED The 1992 United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro further articulated it in its Rio Declaration and Agenda 21 action programme. However, it can be said that these greatly heightened the world's appreciation of the limits on nature's capacity to bear human developmental activities and thus the need for sustainable development. In many ways, the Rio Conference has enhanced the concept through clearer enunciation of the need to integrate environment and development. Principle 4 of the Rio Declaration[20] specifically provides for and requires sustainable development :

> *In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.* (emphasis added)[21]

Other principles address problems concerning sustainable development more

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[19] *Ibid*, pp 92-93 He notes that the Charter's declaration of "standards for evaluating the behaviors of people and nations and goals toward which efforts should be directed is an important element in the development of public and international policy"

[20] The Rio Declaration on Environment and Development, UN Doc A/CONF 151/5/Rev 1 (June 13, 1992), reprinted in 31 ILM (1992) 874

[21] As also in the case of WCN, the use of "shall" does not make the UNGA Resolution or the Rio Declaration binding *per se* Although the Rio Declaration is different from the WCN in that it was adopted by consensus, this procedure makes it more difficult to evaluate what is the position of individual states Thus the legal significance of the Declaration depends very much on subsequent state practice

comprehensively and more concretely. These include those relating to eradication of poverty as "an indispensable requirement for sustainable development" (Principle 5); according special priority to the needs of developing countries, particularly the least developed (Principle 6), the "common but differentiated responsibility" of states in pursuing sustainable development (Principle 7), reduction and elimination of unsustainable patterns of production and consumption (Principle 8); and encouraging "public awareness and participation" by providing access to information and judicial and administrative proceedings concerning the environment (Principle 10) In addition, principles relating to the implementation of sustainable development are spelled out, namely the precautionary principle (Principle 15), the polluter-pays principle (Principle 17), intergenerational equity (Principle 3), requirement of environmental impact assessment (Principle 17), public participation, and those calling for recognition of indigenous rights and community-based management, including the role of women (Principles 10, 20 and 22) Associated issues relating to the goal of sustainable development are also raised, such as the right to development and to a healthy environment (Principles 1 and 3).

In general, there is clearer recognition of the developmental need of developing countries in the Rio Declaration than in the Stockholm Declaration; for example, Principle 2 of the Rio Declaration which purports to reiterate Principle 21 of UNCHE adds the words "and developmental", thus :

> *States have .....the sovereign right to exploit their own resources pursuant to their own environmental and <u>developmental</u> policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction* (emphasis added)

It has been observed that this stronger emphasis on development upsets the delicate balance in Principle 21 of the UNCHE Declaration (now regarded as a principle of customary international law) between the sovereign use of natural resources and the

duty of care for the environment.[22] Indeed the concept of sustainable development itself has been criticized in that, by emphasising the integration of environment into development, it may conceal the underlying conflict between development and economic growth on the one hand, and the imperatives of environmental protection on the other, or even subordinate environment to development [23]

No matter whether the concept has weakened international environmental law or not, it is now beyond question that the concept of sustainable development has become widely established as a significant concept applicable to environmental protection and decision-making in the development process at all levels and that its importance will continue in the decades to come. An increasing number of treaties specifically refer to it. Examples include the 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources, the 1990 Fourth Lome Convention and the 1992 UNCED Framework Conventions on Climate Change and Biodiversity. Much uncertainty still exists with regard to the legal status of the concept It has been perceived, due to its "abstract, ambiguous and multidimensional character", as being unsuited to function as a source from which certain legal rules of State behaviour can emanate.[24] Conversely, the concept is seen as an evolving concept which is emerging as a principle of international law.[25] However, most writers seem to agree that, despite its uncertain contents and legal nature, the concept is now functioning as a *de facto* constraint on both developmental and environmental decision making. It is possible that in future more concrete legal content will evolve under the umbrella of the

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22 M Pallemaerts, *International Environmental Law from Stockholm to Rio : Back to the Future?*, 1 **RECIEL** (1993) p 254, at p 256

23 *Ibid*, p 263

24 U. Beyerlin, *The Concept of Sustainable Development*, (draft), paper presented at the International Symposium on "Enforcing Environmental Standards : Economic Mechanisms As Viable Means ?", 5-7 July, 1995 Heidelberg, p 18, publication forthcoming

25 F. Weiss, *The GATT 1994 environmental sustainability of trade or environmental protection sustainable by trade?*, in K. Ginther et al (eds), **Sustainable Development and Good Governance**, Martinus Nijhoff, Dordrecht/Boston/London, 1995, pp 382-401, at p 389

concept through State practice and more substantive standards set by treaties and other international instruments. In the light of the persisting uncertainty surrounding the concept of sustainable development, extended analysis of the principles which, according to UNCED's Agenda 21, are inherent in the concept, is therefore, necessary

2. Inherent Principles

2.1 The Precautionary Principle

The precautionary principle is said to have originated in the German law concept of *Vorsorgeprinzip*, which has developed since the early 1980's [26] Nevertheless, there is evidence of precautionary thinking in some earlier international instruments such as the Stockholm Declaration,[27] which recognises the need for conservation of natural resources "through careful planning or management" for the benefit of future generations as well as to guard against the future exhaustion of non-renewable natural resources [28] More specifically, Principle 7 provides that :

> *States shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea* (emphasis added)

The 1982 WCN is the most elaborate instrument relating to the precautionary approach. Article 11 provides as follows:

> *Activities which might have an impact on nature shall be controlled, and the best available technologies that minimize significant risks to nature or other adverse effects shall be used; in particular :*
> *(a) Activities which are likely to cause irreversible damage to nature shall be avoided;*
> *(b) Activities which are likely to pose a significant risk to nature shall be preceded by an exhaustive examination; their proponents shall demonstrate that expected benefits outweigh potential damage to nature, and where potential*

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[26] D Freestone, *The Precautionary Principle*, in R. Churchill and D Freestone (eds), **International Law And Global Climate Change**, Graham & Trotman / Martinus Nijhoff, London/Dordrecht/Boston, 1991, pp 21-39, at p 21

[27] *Ibid.*, p 33

[28] Principles 2 and 5 of the UNCHE Declaration

adverse effects are not fully understood, the activities should not proceed,
(c) Activities which may disturb nature shall be preceded by assessment of their consequences, and environmental impact studies of development projects shall be conducted sufficiently in advance, and if they are to be undertaken, such activities shall be planned and carried out so as to minimize potential adverse effects;

It can be seen from the above that this instrument, by implication so far as best available technology is concerned, enumerates various elements which have often been associated with the precautionary principle, namely prohibition of activities which may cause irreversible damage, environmental assessment and the burden of proof on the proponents of the proposed activities.

The variety and weight of different interpretations which have been inferred from the precautionary principle make it more difficult to formulate a uniform definition. The Bergen Declaration on Sustainable Development in the ECE Region specifies its following essential elements :

In order to achieve sustainable development, policies must be based on the precautionary principle Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation [29]

But in a stronger formulation adopted by some environmentalists, the precautionary principle implies a shift of the burden of proof from those alleging that an activity is likely to be harmful to those engaging in a potentially polluting activity, requiring them to establish that their proposed activities will cause no environmental harm The prior justification procedure now required by the Oslo Commission, established by the 1972 Oslo Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft[30], in its Decision 89/1 of 14 June 1989 on the reduction and cessation of dumping industrial wastes at sea reflects this rigorous element of the

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[29] *The Bergen Ministerial Declaration on Sustainable Development*, 20 **EPL** (1990) p 100, Paragraph 7 The Declaration was adopted by the Conference on "Action for a Common Future" held in Bergen, Norway, May 8-16, 1990

[30] 932 **UNTS** 3, **UKTS** 119 (1975), 11 **ILM** (1972) 262 In force 7 April, 1974

principle.[31]

There is abundant further evidence of international recognition of the precautionary principle As well as the WCN, the Bergen Ministerial Declaration and the Oslo Commission Decision cited above, both the Declarations of the Second and the Third International Conferences on the Protection of the North Sea explicitly refer to the principle. In the Declaration of the Second Conference (the London Declaration),[32] the precautionary approach is mentioned in the preamble and in the section on inputs via rivers of substances that are "persistent, toxic and *liable* to bioaccumulate". Indeed, this is the first international instrument to make explicit reference to the precautionary approach and the principle of precautionary action.[33] Its preamble states that

> ....., *in order to protect the North Sea from possible damaging effects of the most dangerous substances, a precautionary approach is necessary which may require action to control inputs of such substances even before a causal link has been established by absolutely clear scientific evidence*.....[34]

In the section on inputs via rivers, the parties agreed to "accept the principle of

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[31] Reprinted in Sands et al (eds), Vol II A, p 454. This Decision provided for the phasing out of dumping of industrial wastes in the North Sea by the end of 1989 and in other Convention waters by the end of 1995 "except for inert materials of natural origin, and except for those industrial wastes for which it can be shown to the Commission through *the Prior Justification Procedure (PJP) both that there are no practical alternatives on land and that the materials cause no harm in the marine environment*" (emphasis added)

[32] *Ministerial Declaration of the Second International Conference on the Protection of the North Sea*, adopted in London, 24-25 November 1987, 27 ILM (1988) 835

[33] Freestone, *The Precautionary Principle*, *supra*, note 26, p 23 He suggests that although recommendations of the Paris Commission (PARCOM) established under the Convention on Land-Based Sources of Marine Pollution are not *per se* legally binding, the unequivocal terms in which the principle is phrased, along with the London Declaration may make a disregard of the principle a breach of good faith See also Y van der Mensbrugghe, *Legal Status of International North Sea Conference Declarations*, 5 IJECL (1990) p 15, who considers the legal status of the Bremen and London Declarations and concludes that although the Declarations are not legally binding because they incur no state responsibility and there is no resort to courts, they have to be carried out in good faith In addition, some legal significance can be attached to them, for instance, the principle of estoppel could be invoked and signatories cannot have recourse to the domestic jurisdiction exception

[34] *op cit.*, note 32, Paragraph VII

safeguarding the marine ecosystem of the North Sea by reducing polluting emissions of substances that are persistent, toxic and liable to bioaccumulate at source, by the use of *the best available technology and other appropriate measures*. This applies especially when there is reason to assume that certain damage to or harmful effects on the living resources of the sea are *likely* to be caused by such substances, *even where there is no scientific evidence to prove a causal link between emissions and effects ("the principle of precautionary action")*....."[35] (emphasis added).

Similarly, the Preamble to the Declaration of the Third North Sea Conference (the Hague Declaration),[36] states that the parties "will continue to apply the precautionary principle, that is to take action to avoid potentially damaging impacts of substances that are persistent, toxic and liable to bioaccumulate even where there is no scientific evidence to prove a causal link between emissions and effects". The Declaration also extends the application of the precautionary approach to inputs of nutrients and pollution from ships.[37]

On 22 June 1989, the Paris Commission[38] adopted two Recommendations, one on the Principle of Precautionary Action and the other on the use of the best available technology.[39] The Preamble to the Recommendation on the Principle of Precautionary Action reproduces the text of Paragraph XVI.I of the London

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35 *Ibid* Paragraph XVI I

36 *Ministerial Declaration of the Third International Conference on the Protection of the North Sea*, adopted at the Hague, 8 March, 1990, reprinted in D Freestone and T Ijstra (eds), **The North Sea : Basic Legal Documents on Regional Environmental Co-operation**, Graham & Trotman / Martinus Nijhoff, Dordrecht/Boston/London, 1991 (hereinafter Freestone's **Basic Documents**), pp 3-39

37 *Ibid* See the Preamble to the section on inputs of nutrients and Paragraph 25 of the section on pollution from ships

38 Established by the Paris Convention for the Prevention of Marine Pollution from Land-Based Sources in the North Sea and North West Atlantic, **UKTS** 64 (1978), Cmnd 7251, 13 **ILM** (1974) 352. In force 6 May 1978

39 PARCOM Recommendations 89/1 and 89/2 of 22 June 1989, reprinted in Freestone's **Basic Documents**, *op cit*, note 36, pp 152-4

Declaration verbatim. The second Recommendation makes a specific reference to the principle of precautionary action in requiring that "in determining whether a set of processes, facilities and methods of operation constitute the best available technology in general or in individual cases, special consideration is given to *inter alia* the precautionary principle".

Another more recent relevant development in an international forum is the Ministerial Declaration on Environmentally Sound and Sustainable Development in Asia and the Pacific adopted in October 1990 at a Ministerial Conference on the Environment held in Bangkok by the UN Economic and Social Commission for Asia and the Pacific (ESCAP). This Declaration, having expressed deep concern for "the economic degradation and the depletion of natural resources in the ESCAP region" asserts that "in order to achieve sustainable development, policies must be based on the precautionary principle"[40]

Strictly speaking, the Declarations and Decisions taken in these various international forums are not binding. However, they have legal significance in so far as they proclaim goals and objectives to be pursued by the participating states in the future and as such have to be carried out in good faith.[41] In present day international relations where a large number of states are involved and where there is a common threat to the global environment, the traditional means of creating international law have been regarded by some as inappropriate.[42] According to this line of argument,

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[40] *Report of UN ESCAP Ministerial Conference on the Environment*, Bangkok, 15-16 October 1990, Appendix 2, pp 8-10

[41] van der Mensbrugghe, *supra*, note 33, at p 28

[42] J I Charney, *Universal International Law*, 87 AJIL (1993) p 529 , the author argues that rather than state practice and *opinio juris*, multilateral forums such as the UN General Assembly, Security Council, regional organizations and diplomatic conferences as well as international organizations devoted to specialized subjects, play a central role in the "creation and shaping of contemporary international law". As it is difficult and impracticable to get states to agree on treaties of universal application, he argues for the authority of such forums to establish laws which will bind all states, especially in matters which are the "gravest

declarations and decisions reached in various international forums, despite their moral or political character, can play an important role in advancing new rules of international law. It is doubtful, however, whether such an approach will ever be accepted as replacing traditional means of creating international law. In fact, States resort to use of declarations at international fora precisely because they consider such statements to be non-binding As will be seen in Chapter 7, this is particularly true in ASEAN whose Member States are unwilling to commit themselves to any kind of binding obligations

There are, however, a number of treaties which refer expressly to the principle of precautionary action. The 1991 Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, in Article 4 which establishes general obligations for the parties, requires that

> (E)ach Party shall strive to adopt and implement the preventive, precautionary approach to pollution problems which entails, *inter alia*, preventing the release into the environment of substances which may cause harm to humans and the environment without waiting for scientific proof regarding such harm The parties shall cooperate with each other in taking appropriate measures to implement the precautionary approach in pollution prevention through the application of clean production methods, rather than the pursuit of a permissible emissions approach based on assimilative capacity assumptions"[43]

In the 1992 Transboundary Watercourses Convention, the Parties adopted the precautionary principle :

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threats to the earth and human kind" See also, I Brownlie, **Principles of Public International Law**, 4th edn , Clarendon Press, Oxford, 1990, p 14, who takes the view that an instrument recording decisions not adopted unanimously at a conference of States may constitute cogent evidence of the state of the customary law on the subject concerned

[43] 30 ILM (1991) 775, Article 4 (f) The Convention was adopted by the representatives of 51 African states at the OAU Pan African Co-ordinating Conference on Environment and Sustainable Development, in Bamako, Mali, on 30 January 1991 At the time of writing, the Convention is not yet in force

by virtue of which action to avoid the potential transboundary impact of the release of hazardous substances shall not be postponed on the ground that scientific research has not fully proved a causal link between those substances, on the one hand, and the potential transboundary impact, on the other hand.[44]

The 1992 Biodiversity Convention implicitly recognises the precautionary principle in its preamble which states that :

> *where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat.*[45]

It is worth noting that although the global climate change issue is among the most significant of the problems which have brought the discussion on the precautionary principle to the forefront, the effective application of the principle in the 1992 Climate Change Convention is tempered by making it depend on "*threats of serious or irreversible damage,.....* taking into account that policies and measures to deal with climate change *should be cost effective* so as to ensure global benefits at the lowest possible cost" (emphasis added).[46] Other treaties which adopt the precautionary principle include the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer,[47] the 1992 new OSPAR Convention[48] , the 1992 Baltic Sea Convention[49] and the 1992 EC Maastricht Treaty [50]

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[44] The 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes, 17 March, 1992; 31 ILM (1992) 1312, Article 2(5)(a) As of September 18, 1992, there were twenty-six signatories of the Convention but it is not yet in force

[45] UN Convention on Biological Diversity, reprinted in 31 ILM (1992) 818.

[46] UN Framework Convention on Climate Change, reprinted in 31 ILM (1992) 851, Article 3(3)

[47] Reprinted in 26 ILM (1987) 1550. It is stated in the preamble of the Protocol that the Parties are "determined to protect the ozone layer by taking precautionary measures to control equitably total global emissions of substances that deplete it "

[48] 32 ILM (1993) 1069, Article 2(2)(a) provides that preventive measures are to be taken when there are "*reasonable grounds for concern* ....even where there is no conclusive evidence of a causal relationship between the input and the effects"

[49] Convention on the Protection of the Marine Environment of the Baltic Sea Area, reprinted in 22 LOSB, publication of UN Division for Ocean Affairs and the Law of the Sea Office of Ocean Affairs January 1993. Article 3(2) stipulates that preventive measures are to be taken "when *there is reason to assume*" that harm might occur "even there is no conclusive evidence of a causal relationship between inputs and their alleged effects".

The rate at and the extent to which the precautionary principle has already been widely accepted is therefore astonishing. Yet, many problems remain as to the precise content of the principle and it has been questioned whether the principle possesses any feature distinguishing it from existing principles of international environmental law at all.[51] In the Federal Republic of Germany where the concept is said to have originated, the principle is far from being clarified [52] The precautionary approach has been associated mainly with the application of the best available technology.[53] However, according to one commentator, the principle should not be identified with any particular regulatory approach since a number of regulatory approaches to its implementation are possible. These include, for example, "stringent environmental quality objectives, the principle of non-degradation, strict prohibition with regard to hazardous substances, prohibition of shifting environmental impacts from one area to another or from one environmental medium to another, comprehensive and timely environmental impact assessments.....or integration of environmental policies into all other policies with a potential impact on the environment."[54]

Related to the question of what is the content of the precautionary principle is the query as to whether it really "breaks new ground". It is observed by one commentator that what is new as a result of the adoption of the precautionary principle is "the way

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[50] The "Environment" Title (XVI) in the Treaty on European Union (TEU), signed February 7, 1992, 31 ILM (1992) 247, 32 ILM (1993) 1693. The Treaty entered into force on 1 November, 1993

[51] See A Nollkaemper, *The Precautionary Principle in International Environmental Law What's New Under the Sun?*, 22 **Marine Pollution Bulletin** (1991), pp 107-110

[52] L Gundling, *The Status in International Law of the Principle of Precautionary Action* 5 **IJECL** (1990) 23, at p 26

[53] E Hey, *The Precautionary Approach . Implications of the Revision of the Oslo and Paris Conventions*, **Marine Policy**, July 1991, 244, at p 245, see also the Second and the Third North Sea Declarations above and the PARCOM Recommendations

[54] See Gundling, *op cit.*, note 52, p 27

in which and the time at which measures are to be implemented". In other words, the measures will be implemented more stringently and as soon as a detrimental effect to the environment becomes plausible.[55] Another writer suggests that."precautionary action is a more stringent form of preventive environmental policy".[56] The significance lies in the fact that the impacts on the environment are reduced or prevented "even before the threshold of risks is reached".[57]

Nevertheless, on a closer analysis it can be argued that the precautionary principle can be related to a number of existing legal concepts.[58] It is an established rule of international law that states are under an obligation to prevent damage which may be caused by activities within their jurisdiction to the environment of other states or of areas beyond the limits of national jurisdiction.[59] The obligation is based on the concepts of "foreseeability", "substantial harm" or "significant harm". This requires states to exercise "due care" or "due diligence" to ensure that no harm is likely to be caused. Within this context, the WCED's Experts Group on Environmental Law and Development recommended that the greater the risks, the more "alertness" and "precaution" is required.[60] The exercise of due care and due diligence entails the duty to provide for exchange of information, prior notice of planned activities to states concerned, environmental impact assessments and consultation.[61] Viewed in this way, the precautionary principle, rather than being a new concept, is only in line with the existing trends in development of the law of state responsibility.

It has been submitted that the innovative aspect of the precautionary principle is the

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55 Hey, *op cit* , note 53, at 245
56 Gündling, *op. cit* , note 52, p 26
57 *Ibid*
58 Freestone, *supra*, note 26, p 31
59 UNCHE, Principle 21, Principle 2, Rio Declaration
60 J G. Lammers (ed),**Environmental Protection and Sustainable Development : Legal Principles for Environmental Protection and Sustainable Development**, Graham&Trotman/Martinus Nijhoff, London/Dordrecht/Boston, 1987, p 80
61 *Ibid*, Articles 15-17

requirement that action should be taken to prevent environmental damage even when there is scientific uncertainty as to the effects of the activities [62] Yet even this innovative aspect has been questioned. According to one commentator, since no waste-generating human activity can be said to be free of risks as regards its environmental consequences, the precautionary principle can only aim to reduce, and not eliminate the risks. Therefore, in practice, it is "meaningless" to interpret the precautionary principle as permitting no discharge of substances unless they are proved to be harmless. In the final analysis, it is all a question of setting thresholds Since the principle cannot be conceived in absolute terms, its definition fails to make clear the distinctive nature of the principle [63] Despite what has been said, it is submitted that the true value of the precautionary principle could lie in its potential to enhance the scope and stringency of preventive measures such as environmental impact assessments and requirements to apply the best available technology. In other words, as the principle is perceived as requiring far reaching preventive measures, it may be used as a basis for the further and broader application of such measures [64]

As far as the legal status of the principle is concerned, it has been suggested that the precautionary principle is emerging as a principle of customary international law.[65] This contrasts with an earlier observation that the fact that the principle has been

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[62] See Freestone, *The Precautionary Principle, supra*, note 26, at pp 33-34

[63] Nollkaemper, *supra*, note 51, pp 107-108 See also A R D Stebbing, *Environmental Capacity and the Precautionary Principle*, 24 **Marine Pollution Bulletin** (1992) 287 Stebbing argues that the adoption of the precautionary principle as an exclusive concept for environmental protection can be overprotectionist as it does not take into account the "assimilative capacity" of the environment Zero discharges are seen to be "as unnecessary as they are unaffordable" Neither is it scientifically feasible to provide conclusive proof of causality between specific toxic contaminants and their biological effects The solution then lies not in the abandonment of the concept of environmental capacity, but in the improvement of the predictive methods and models used in the anticipatory phase of pollution control strategies

[64] Nollkaemper, *op cit*, pp 109-110.

[65] J Cameron and J Abouchar, *The Precautionary Principle A Fundamental Principle of Law and Policy for the Protection of the Global Environment*, 14 **Boston CICLR** (1991) p 1, at pp 20-21.

recognized in many non-binding instruments is insufficient to make it a binding rule of international law.[66] However, this latter view is seen as outdated by some commentators due to more recent development toward greater acceptance of the rule.[67] At the global level, the precautionary approach is expounded in Principle 15 of the Rio Declaration as follows :

> *In order to protect the environment, the precautionary* ***approach*** *shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost - effective measures to prevent environmental degradation* (emphasis added).

In view of the fact that Principle 15 uses the term "threats of serious or irreversible damage" as well as its reference to "cost-effective measures", the Declaration enunciates a weaker version of the precautionary principle. It is also worth noting that the rule is formulated as an "approach" rather than as a "principle". This probably implies that the rule has not been fully accepted as a principle in international law under the Rio Declaration. Probably this is because the developmental aspects of the Declaration could enable limited weight to be accorded to the precautionary principle under certain circumstances. Despite its attraction, the diverse interpretations and the prevailing uncertainty as to the precise content and scope of the rule makes it premature to conclude that it is already a principle of international law.

Although the precautionary principle is still characterised by some uncertainty as to its content and application, there is no doubt that it has become an important and accepted political and moral principle for environmental protection in the context of sustainable development Agenda 21, Chapter 35 entitled "Science for Sustainable Development" recognizes that threats to the global environment require major preventive and corrective actions; that "in the face of threats of irreversible

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[66] Gundling, *supra*, note 52, at pp.29-30
[67] Freestone, *supra*, note 26, at p 37

environmental damage, lack of full scientific understanding should not be an excuse for postponing actions" and that "the precautionary approach could provide a basis for policies relating to complex systems that are not yet fully understood and whose consequences of disturbances cannot yet be predicted "[68] The principle is now being extended beyond the area of marine pollution to cover all aspects of hazardous waste disposal and even exploitation of living resources. It is of particular relevance to the discussion on measures with respect to global climate change Above all, the principle is based on a sound logic for environmental protection. What seems necessary for its effective implementation, however, is to strengthen or develop supervisory mechanisms and criteria to ensure regulatory measures such as environmental impact assessments and use of best available technology are truly and effectively implemented as an integral part of sustainable development.

2.2 The Polluter Pays Principle

The polluter pays principle (PPP) was initially a principle of economic policy aimed at optimising resource allocation. The resource in this context is the environment's capacity to absorb emissions and waste. The rationale is that in order to maximize profits, producers do not normally add the costs of deterioration of the environment (i.e. the "social costs") to product prices. According to economists, if the cost of natural resources, such as water or air is not properly reflected in the product price, this will stimulate over-production, which will ultimately lead to "market failure". Such failure will lead to pollution problems Thus from the point of view of environmental preservation, the PPP can serve to internalize within product prices environmental costs or social costs resulting from the production process.

Problems similar to those related to determining the legal status and the exact content of the precautionary principle also arise with regard to the PPP. The development of

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[68] Agenda 21, para 35.3

the PPP has largely been associated with the work of the Organisation for Economic Co-Operation and Development (OECD) since the early 1970's[69] which since 1972 has been the leader in promoting application of the principle as a pollution control mechanism. The OECD Guiding Principles Concerning International Economic Aspects of Environmental Policies define the PPP as follows :

> *The principle to be used for allocating costs of pollution prevention and control measures to encourage rational use of scarce environmental resources and to avoid distortions in international trade and investment is the so-called "Polluter-Pays Principle". This principle means that the polluter should bear the expenses of carrying out the above mentioned measures decided by public authorities to ensure that the environment is in an acceptable state In other words, the cost of these measures should be reflected in the cost of goods and services which cause pollution in production and/or consumption. Such measures should not be accompanied by subsidies that would create significant distortions in international trade and investment.*[70]

It appears from this definition that, as a general rule, the costs of pollution prevention and control measures should be borne by the polluter in the private sector and governments should not provide subsidies for implementing such measures. However, the 1974 OECD Council Recommendation on the Implementation of the PPP gave a more concrete interpretation of the principle.[71] The Recommendation provides for exceptions to the PPP by allowing a governmental grant in exceptional circumstances.[72] Further endorsement to the PPP was given by the OECD

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[69] For a comprehensive discussion of the PPP, see S E. Gaines, *The Polluter-Pays Principle · From Economic Equity to Environmental Ethos*, 26 **Texas ILJ** (1991) p 463 For the work of the OECD on the PPP, see generally C. Stevens, *The OECD Guiding Principles Revisited*, 23 **Environmental Law** (1993) p 607, and C. Stevens, *Interpreting the Polluter Pays Principle in the Trade and Environment Context*, 27 **Cornell ILJ** (1994) p 577

[70] **OECD Guiding Principles Concerning the International Economic Aspects of Environmental Policies**, OECD Document C(72)128, 26 May, 1972, reprinted in 11 ILM (1972) 1172 (hereinafter *OECD 1972 Guiding Principles)*, Article 4.

[71] Adopted 14 November 1974, C(74) 223, reprinted in 14 ILM (1975) 234, (hereinafter *OECD 1974 Recommendation*)

[72] *Ibid* , Article II (2) (3) and (4) These circumstances are such as the rapid implementation of a compelling and especially stringent pollution control regime, need to stimulate experimentation with new pollution-control technologies and development of new pollution-

throughout the 1980's [73]

Despite the OECD's consistent support for the PPP, it is worth noting that the OECD Recommendations are not legally binding.[74] However, recognition of the PPP can be found in the legal texts of some recent international conventions. The principle has been widely accepted in EC law.[75] The PPP is also specifically referred to in other treaties such as the 1992 UN ECE Transboundary Waters Convention,[76] the 1992 OSPAR Convention,[77] and the 1992 Baltic Sea Convention.[78] It has been referred to as a "general principle of international environmental law" in the preambles of the 1990 International Convention on Oil Pollution Preparedness, Response and Cooperation,[79]and of the ECE Convention on the Transboundary Effects of Industrial Accidents.[80] Outside the developed world, the PPP is implicit in such international agreements as the ASEAN Agreement on the Conservation of Nature and Natural Resources.[81] At UNCED, the PPP was further endorsed in Rio Declaration and Agenda 21. Principle 16 of the former provides that :

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abatement equipment, and necessity to promote a country's specific economic objectives Article III further specifies that the granting of assistance should be "selective", "limited to well-defined transitional periods", and "should not create significant distortions in international trade and investment

[73] See *OECD Recommendation on Energy and Environment*, 1985, reprinted in 15 **EPL** (1985) p.70, and *OECD Recommendation on the Application of the Polluter Pays Principle to Accidental Pollution*, reprinted in 19 **EPL** (1989) p 184, and 28 **ILM** (1989) 1320, (hereinafter *OECD Accidental Pollution Recommendation*)

[74] Implementation of the PPP at the national level in OECD countries except the US has neither been consistent nor vigorous, the biggest problem being granting of subsidies, see Gaines, *supra*, note 69, pp 479-81

[75] See Chapter 8.

[76] Article 2 (5)(b)

[77] Article 2 (2)(b)

[78] Article 3 (4)

[79] 30 **ILM** (1991) 735

[80] 31 **ILM** (1992) 1330

[81] **ASEAN Document Series, 1967-86,** p 203, reprinted in 15 **EPL** (1985) p 64 By Article 10 (d) of the Agreement, the Parties, in their efforts to prevent, reduce and control degradation of the natural environment, must endeavour to take specific measures "as far as possible to consider the *originator* of the activity which may lead to environmental degradation responsible for its prevention, reduction and control as well as, wherever possible, for rehabilitation and remedial measures required" (emphasis added)

> *National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment* (emphasis added)

It is worth noting that the wording of Principle 16 not only leaves implementation of the polluter pays principle entirely to national governments, but also requires them only to take the principle "into account". It does not require its application and thus does little to advance the implementation of the principle at the international level. Apart from the Rio Declaration, Agenda 21 in its Chapter 8 entitled "Integrating environment and development in decision-making" encourages increasing use of economic and market-oriented approaches, citing the PPP as an example.[82] The objectives of using such approaches are, *inter alia*, "to incorporate environmental costs in the decisions of producers and consumers .." and "to move more fully towards integration of social and environmental costs into economic activities, so that prices will appropriately reflect the relative scarcity and total value of resources and contribute towards the prevention of environmental degradation".[83] Like the Rio Declaration, however, Agenda 21 is not legally binding.

Technically, application of the PPP can take various forms In principle, these include the use of economic instruments to internalize environmental costs, such as process and product standards, individual regulation and prohibitions, various kinds of pollution charges,[84] and specific fees or taxes payable by certain installations on account of their hazardous nature (e g licensing fees) [85] The 1991 OECD Council Recommendation on the Use of Economic Instruments in Environmental Policy[86]

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[82] Agenda 21, para 8 28

[83] *Ibid*, para 8 31.

[84] **Note on the Implementation of the Polluter-Pays Principle**, OECD Doc Env (73) 32, adopted 21 January, 1974, reprinted in 14 **ILM** (1975) 238

[85] *OECD Accidental Pollution Recommendation, supra*, note 73, Article 9

[86] OECD Council Recommendation, C(90)177/Final, 31 January, 1991, reprinted in Sands et al (eds), Vol II B, pp 1185-97

provides some further guidance on the types of instruments which can be used such as charges and taxes, marketable permits and deposit-refund systems

Although it can be said that the PPP has long been recognized as an instrument of economic policy which serves as a pollution-control mechanism, its acceptance outside Europe and America is far from widespread; it has largely been associated with OECD. The PPP is likely to be less attractive to developing countries which accord priority to industrial or economic development over environmental consideration, thus to apply the principle internationally, harmonisation of environmental policies is a necessary precondition [87] The disparity in the application of the PPP between developed and developing countries has raised some international trade issues concerning a loss of competitive advantage due to higher pollution control costs in countries which do apply the PPP to their industry.[88]

Another important question is how the principle can be applied at the inter-state level with regard to the allocation of transboundary environmental costs It has been observed by one writer that the present international law of State responsibility is too indirect and too uncertain in itself to constitute a means of implementing the PPP [89]

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[87] U Kettlewell, *The Answer to Global Pollution? A Critical Examination of the Problems and Potential of the Polluter-Pays Principle*, 3 **Cornell JIELP** (1992) p 429, at pp 445-9

[88] Fear (mostly among industrialised countries) of a loss of competitive advantage has led to arguments that characterise "externalisation of environmental costs" as an inadmissible subsidy under GATT which would justify imposition of countervailing duties by importing nations, see for example, E. Patterson, *International Trade and the Environment Institutional Solutions*, 21 **Envt'l L. Rep.** (1991) p 10599, at pp 10601-2 In the longer term, application of the principle should be in the developing countries' interest as externalizing environmental costs means that exports of commodities from developing countries are considerably underpriced and that this deprives such countries of the financial resources needed for sustainable development In other words, application of the PPP could benefit the developing countries and bring about more equitable terms of trade; see C Arden-Clarke, **International Trade, GATT, and the Environment**, WWF International Position Paper, May 1992, at p 3.

[89] A E Boyle, *Responsibility in the Allocation of Transboundary Environmental Costs*, in F Francioni and T. Scovazzi (eds), **International Responsibility for Environmental Harm**, Graham & Trotman, London/Dordrecht/Boston, 1991, pp 363-379, at p 366 The international law of State responsibility has several limitations It depends on the discretion

Nor do private law solutions to the problem of distribution of transboundary environmental costs indicate sufficient implementation of the principle.[90] It is argued that even under the most developed models of a group of treaties which create special schemes for dealing with liability for damages caused by nuclear risks[91] and oil pollution,[92] the PPP can hardly be said to have been implemented in full.

The legal status of the PPP as well as its value in international environmental law thus remain questionable It has been considered by some as having become a legal principle, although it needs more precise definition and clarification of the exceptions that should be allowed in the application of the principle [93] On the other hand, the principle can be viewed more convincingly as an economic policy without obligatory force.[94] From the point of view of sustainable development, the PPP is a sound principle for environmental protection. Externalization of environmental costs tends to encourage wasteful and destructive patterns of consumption both in developed and

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of State to exercise diplomatic protection for the victim and the extent of the source State' responsibility as guarantor of private conduct causing pollution is still controversial Besides, although liability for transboundary pollution harm should be strict in principle, there is little consistent state practice to support this

90 *Ibid* , pp 367-376

91 These include the 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy, 1963 Vienna Convention on Civil Liability for Nuclear Damage, 1962 Brussels Convention on the Liability of Operators of Nuclear Ships, and 1971 Brussels Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material These four Conventions create a common scheme based on the absolute liability of the operator of the nuclear installations, but the liability is limited in amount and supported by additional compensation funds which come from States operating nuclear installations, see Boyle, *supra*, note , p 374

92 The 1969 Convention on Civil Liability for Oil Pollution Damage, 9 **ILM** (1970) 45, and the 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 11 **ILM** (1972) 284. The 1969 Convention creates strict liability for the shipowner of the oil vessel, but the owner is entitled to limit his liability according to a formula related to the tonnage of the ship and to an overall total The 1971 Convention established a compensation fund to ensure that within the limits of the Fund's total liability, the victims are fully and adequately compensated On civil liability for marine pollution including oil pollution from ships, see Birnie and Boyle, *supra*, note , pp 292-99

93 H Smets, *The Polluter Pays Principle in the Early 1990's*, in Campiglio et al (ed), **The Environment After Rio**, Graham & Trotman / Martinus Nijhoff, London/Dordrecht /Boston, 1994, pp 131-144, at p 143

94 Birnie and Boyle, *supra*, note 11, p 292

developing countries. The PPP can serve to control environmental harmful activities by internalizing environmental costs and ensuring responsibility on the polluter for environmental damage. However, recent developments have shown an opposite trend in application of the principle at the international level. It is now well accepted that the Northern countries will have to provide financial and technological assistance to help polluters in the South to bear the costs of pollution prevention and control.[95] Some authors have termed this situation "the victim-pays principle".[96]

2.3 Intergenerational Equity

The idea of conserving nature and natural resources for the benefit of future generations is predominant in the concept of sustainable development. One of the 1972 UNCHE Declaration's preamble goals is the defending and improving of the human environment for present and future generations. The aim is further expounded in Principles 1 and 2 which assert respectively that man "bears a solemn responsibility to protect and improve the environment for present and future generations", and that "the natural resources of the earth..... must be safeguarded for the benefit of present and future generations". Similarly, the preamble of the WCN reaffirms that "man must acquire the knowledge to maintain and enhance his ability to use natural resources in a manner which ensures the preservation of the species and ecosystems for the benefit of present and future generations". The WCED also expresses sustainable development as development which "meets the needs of the present without compromising the ability of future generations to meet their own needs". Moreover, Principle 3 of the Rio Declaration proclaims that "the right to development must be fulfilled so as to equitably meet developmental and environmental needs of

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[95] For instance, under the 1987 Montreal Protocol on Substances That Deplete the Ozone Layer, the 1992 Convention on Climate Change and Agenda 21, financial mechanism as well as technological assistance is provided to help developing countries to implement their obligations to conserve the environment See Chapter 2, at pp .

[96] F Cairncross, **Costing the Earth : the Challenge for Governments, the Opportunities for Business**, Harvard Business School Press & the Economist Books Ltd , U S A , 1992, pp 153-4

present and future generations".

To date, the most comprehensive discussion of the principle of intergenerational equity is that provided by Edith Brown Weiss.[97] who considers that the human species holds the natural and cultural resources of the planet in trust for all generations. Weiss bases her idea of a planetary trust on Anglo-American charitable public trust law. Thus the present generation serves at one and the same time as both a trustee for future generations and as a beneficiary of the trust.[98] The purpose of the planetary trust is to sustain the welfare of future generations.[99] This purpose has three aspects, namely "to sustain the life-support systems of the planet, to sustain the ecological processes, environmental conditions and cultural resources necessary for the survival of human species; and to sustain a healthy and decent environment".[100]

Three basic principles to ensure fulfilment of intergenerational equity are proposed First, the trustees should be required to conserve the diversity of the resource base so that the options available for future generations in solving their problems and satisfying their own values are left as wide as possible ("Conservation of Options"); secondly, trustees should be required to pass on the planet to the next generation in no worse condition than that in which the present generation received it ("Conservation of Quality").[101] Thirdly, each generation should provide its members with equitable rights of access to the legacy of past generations and should conserve such access for

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97 See E. B Weiss, *The Planetary Trust : Conservation and Intergenerational Equity*, 2 **ELQ**, (1984) p 495, also E B Weiss (ed), **In Fairness to Future Generations : International Law, Common Patrimony and Intergenerational Equity**, The United Nations University, Tokyo, Transnational Publishers Inc , New York, 1989, E.B. Weiss, *Our Rights And Obligations To Future Generations For The Environment*, 84 **AJIL** (1990) p 198, and E.B. Weiss, *Intergenerational Equity : A Legal Framework for Global Environmental Change* in E B Weiss, (ed), **Environmental Change and International Law**, United Nations University Press, Tokyo, 1992, pp 385-412.

98 *Ibid* , *The Planetary Trust*, p 499

99 *Ibid* , pp.508-9 and 523.

100 See **In Fairness to Future Generations**, *supra*, note 97, p 37

101 Weiss, **The Planetary Trust**, *supra*, note 97, p 525

future generations ("Conservation of Access").[102] These principles constrain trustees' actions in administering the planetary trust. They assume that future generations will want, as a minimum, "a reasonably secure and flexible resource base and a reasonably decent natural environment in which to pursue their goals according to their own values".[103]

Several strategies are proposed for fulfilling planetary obligations. These include representation of future generations in decision-making processes by granting standing to a representative of future generations in judicial or administrative proceedings concerning the environment or appointing ombudsmen for future generations who would be responsible for ensuring that the proposed principles for administering the planetary trust are observed;[104] sustainable use of renewable resources as well as monitoring natural and cultural resource diversity and environmental quality;[105] the setting up of various programmes of scientific research and development which would enable refinement of resource diversity and quality indices and better assessment of the risk posed by present activities to the diversity and quality of our natural and cultural heritage,[106] and establishing trust funds to

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[102] Weiss, *supra*, note 100, p 38 Weiss uses the device of "the original position" in Rawl's " Theory of Justice" to derive the principles of intergenerational equity, according to which, if people in a hypothetical condition (i e "in the veil of ignorance") are to choose a principle of justice which will govern the allocation of resources for all members of society , they will choose one which would benefit even the least advantaged members, because they do not know in what position they would be Similarly, if we use the same device which prevents the present generation from having any advance knowledge or details of their own real situation, the members of the present generation would choose principles by which the present generation would inherit the planet in no worse condition than that enjoyed by the previous generation and with good access to the planetary legacy as that enjoyed by the previous generation

[103] Weiss, *Planetary Trust*, *supra*, note 97, pp 525-526

[104] See *ibid*, pp 564-570, and **In Fairness to Future Generations**, pp 120-126 Weiss suggests that we should establish local, national and international ombudsmen in order to implement the planetary trust more effectively, as well as ombudsmen charged with handling specific environmental problems At the international level, Weiss suggests that ombudsmen for future generations may resemble the Human Rights Commissioners

[105] *Planetary Trust*, *ibid* , pp 576-578.

[106] *Ibid* , pp 578-9. See also *Goa Guidelines on Intergenerational Equity*, 18 **EPL** (1988) p 190, at p 191, according to which various similar strategies were proposed

provide insurance against effects which cause harm to the health of future generations, such as the need to clean up areas seriously polluted, to fund scientific research and to compensate individuals who suffer "particularized harms" traceable to the actions of prior generations.[107]

Weiss' work has generated a great deal of subsequent discussion by various writers In many respects, most of the counter-arguments put forward against Weiss' theory of intergenerational equity are theoretical. For instance, it has been argued that since our knowledge of future generations in respect to their number and kind, values, interests or technologies, as well as their decision-making processes is limited and since this limitation increases as generations become even more remote, lack of reliable information about the future will inevitably affect the ability of the representatives of future generations to function effectively.[108] Another writer draws on Parfit's thesis, premised on chaos theory, that our intervention in the environment will affect the ecosphere to the extent that people who will be born in the future are different from those who would have been born if we had not intervened in the environment.[109] On the other hand, Weiss' theory has been supported by Gundling who sees the debate on sustainable development as a discourse on our responsibility to future generations However, Gundling thinks that rather than concentrating on arguments concerning the rights of, and duties toward future generations, it is more important to identify what the concrete obligations are and how these obligations can be fulfilled under the present circumstances of the international community.[110]

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107 *Planetary Trust*, pp 579-80

108 G. P Supanich, *The Legal Basis of Intergenerational Responsibility An Alternative View -The Sense of Intergenerational Identity*, 3 **YIEL** (1992) p 94, at p.98

109 A. D'Amato, *Do We Owe A Duty To Future Generations To Preserve The Global Environment*, 84 **AJIL** (1990) p 190, citing D Parfit's *On Doing the Best for Our Children* in M Bayles (ed), **Ethics And Population**, 1976.

110 L. Gündling, *Our Responsibility To Future Generations*, 84 **AJIL** (1990) p 207, at pp 210-211 These include the taking of precautionary action to ensure that "natural resources are used sparingly and that the degradation of the environment is reduced to a

Despite the appeal which the principle of intergenerational equity has to common sense, Weiss' idea is regarded by some as no more than an intellectual exercise. It has been observed that the extension of obligations to future generations is "wildly unrealistic" and a "misplaced utopianism" because even without taking into account the interests of future generations, it is already a difficult task to reconcile the environmental interests of members of the present generation.[111] However, a recent case decided by a domestic court demonstrates the possibility that the principle may be enforceable provided that there is enough "judicial activism".[112]

Undeniably, the strong support for the principle of intergenerational equity, evidenced by its enunciation in various recent international instruments, has made it a prominent feature of sustainable development. Yet, it is highly questionable whether it is a principle of law, or the more unlikely, a principle of customary international law based on state practice. In addition, it is doubtful how far the concept can be enforced and by whom in the international context. Experience has shown that it is not enough to establish any particular principle even if it is included in a treaty, if international enforcement mechanisms are lacking. This has always been a problem in

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minimum".

111 A E Boyle, *Review of "In Fairness to Future Generations"*, 40 ICLQ (1991) p 230

112 See *Minors Oposa V. Secretary of the Department of Environment and Natural Resources (DENR)*, reprinted in 33 ILM (1994) 173 This is a case decided by the Supreme Court of the Philippines and a good illustration of a domestic application of the principle of intergenerational equity In this case, the plaintiffs, in representing both their and future generations, claimed a right to a balanced and healthful ecology and asked the Court to order the defendants (i e. the Secretary of DENR and his agents) to cancel all existing timber licence agreements in the country and to cease and desist from receiving, accepting, processing, renewing or approving new timber license agreements The Supreme Court, in setting aside the dismiss order of the respondent Judge which had ruled that the plaintiffs had no cause of action, decided that the plaintiffs had a cause of action to sue for themselves and, "based on the concept of intergenerational responsibility in sofaras the right to a balanced and healthful ecology is concerned", for the succeeding generations As a result, the Court found abundant support from the constitutional and other laws for that right of the plaintiffs and those they represent which has been violated However, as far as the cancellation of existing timber licence agreements are concerned, the Court ruled that there is a need to implead as defendants the holders or grantees of the questioned agreements

international law, particularly in areas where obligations are vague. Legal "rights" in such circumstances remain inchoate, as the early development of human rights, and their subsequent categorisation as first, second and third generation of rights as they emerged, according to their enforceability and evidences supporting their existence As will be seen later, these problems also arise in determining the legal status of the right to development and to a clean and healthy environment

2.4 Common Concern

"Common concern" is a relatively new concept in international environmental law Its initial development is closely associated with the protection of the global atmosphere. In 1988 the UN General Assembly recognized in its Resolution 43/53 that "climate change is a common concern of mankind since climate is an essential condition which sustains life on earth" and urged governments, intergovernmental and non-governmental organizations to collaborate in a concerted effort to prepare a framework Convention on Climate Change [113] The same terminology has been picked up subsequently in a number of international instruments, namely the Noordwijk Declaration on Atmospheric Pollution and Climatic Change,[114] the 1992 UN Framework Convention on Climate Change[115] and the 1992 Convention on Biological Diversity.[116]

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[113] UNGA Res 43/53, 6 December, 1988 The "common concern" language was repeated again in the preamble of UNGA Res 44/207, 22 December, 1989 As a matter of fact, the choice of language was a result of a political compromise following the Government of Malta's proposal that the climate be treated as part of the common heritage of mankind

[114] Adopted at the Ministerial Conference on Atmospheric Pollution and Climatic Change, 5-7 November, 1989, 19 EPL (1989) p 229 Article 7 of the Declaration provides, *inter alia*, that "(c)limate change is a common concern of mankind All countries should now, according to their capabilities and the means at their disposal, initiate actions and develop and maintain effective and operational strategies to control, limit or reduce emissions of greenhouse gases".

[115] The Preamble recognizes that "change in the Earth's climate and its adverse effects are a common concern of mankind"

[116] The Preamble of the Convention affirms that "the conservation of biological biodiversity is a common concern of mankind" It has been submitted by one writer that "common concern" in the context of the conservation of biodiversity means that the issue has ceased to be the internal affair of a single State and become the concern of all States acting in trust for

While it is clear that the concept is distinct from the concepts of "common property" and "common heritage of mankind", much uncertainty exists as to its legal implications apart from its recognition that all states have a common interest in protecting the global atmosphere as a global unity and that, therefore, the issue can legitimately be placed on the international agenda and is not a matter of domestic jurisdiction over airspace [117] It has been suggested that the fact that climate change is a matter of "common concern" should imply that states have obligations to conserve the global atmosphere and these obligations are enforceable *erga omnes*. Similarly, it has been asserted that customary international law requires States to take appropriate steps to protect endangered species.[118] Thus, some natural resources, such as tropical rain forests, unique cultural artifacts, as well as the elephant can be regarded as global environmental resources the protection of which can be expected of the State in whose territory the particular resource is found, and that obligation runs to the international community as a whole.[119] In this context, the *Barcelona Traction Case*[120] is viewed as supporting this interpretation In this case, the ICJ held that there was a category of obligations *erga omnes* which states owe toward the international community as a whole. These were obligations which were "the common concern of all states" and all states could therefore be held to have a legal interest in their protection.[121] The rules of international law which give rise to this type of obligation are often identified as belonging to the realm of peremptory norms of international law or *jus cogens* within the scope of Article 53 of the Vienna

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future generations, R Wolfrum, *The Convention on the Protection of Biological Diversity Using State Jurisdiction as a Means of Ensuring Compliance*, on file with writer, at p 10

[117] A E Boyle, *International Law and the Protection of the Global Atmosphere . Concepts, Categories and Principles*, in Churchill and Freestone, *supra*, note 26, pp.7-19, at p 11

[118] M J Glennon, *Has International Law Failed the Elephant ?*, 84 **AJIL** (1990) p 1, at p 30

[119] *Ibid* , pp 34-5

[120] **ICJ Rep.** (1970) 4

[121] *Ibid* , at p 32 The Court was referring to acts of aggression, genocide and the "basic rights of the human person", including protection from slavery and racial discrimination

Convention on the Law of Treaties Thus, it is argued that "pollution reaching such a degree that it would represent a threat to the entire international community (e g critical ozone depletion or climate change) would be in conflict with a peremptory rule of international law".[122] If states' obligations in the area of climate change are treated as *erga omnes*, one result is that any state could have standing to bring claims to enforce the rules concerning protection of the global atmosphere without having to allege that it is uniquely affected.[123] Given that States have obligations to preserve the global commons, these obligations are however based on the principle of "common but differentiated responsibilities" enunciated by the UNCHE Declaration and enhanced by the Rio Declaration[124] whereby industrial countries, in view of their historical responsibility and their present contribution to the world's pollution problems, have an obligation to provide financial resources and technology transfer for developing countries to enable them to carry out their conservation obligations

To a certain extent, Article 19 of the International Law Commission's Draft Articles on State Responsibility[125] seems to support this proposition of obligations *erga omnes*. The Article introduces the concept of international crimes and international delicts. Article 19 (2) provides that "(a)n international wrongful act which results from the breach by a State of an international obligation *so essential for the*

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122 J Brunnée, *"Common Interest" - Echoes from an Empty Shell ? Some Thoughts on Common Interest and International Environmental Law*, 49 **ZAORV** (1989) p 791, at pp 801-4 Also see M M Whiteman, *Jus Cogens in International Law, With a Projected List*, 7 **Georgia JICL** (1977) p 609, at pp 625-26 where the author lists 20 acts which are considered outlawed under the "projected list of peremptory norms of international law. These include, *inter alia*, genocide, slavery, piracy, terrorism and contamination of the air, sea, or land with a view to making it harmful or useless to mankind

123 F L. Kirgis, *Standing to Challenge Human Endeavors that Could Change the Climate*, 84 **AJIL** (1990) p 525, at pp 537-28, and Boyle, *supra*, note 117, at pp 11-12

124 Principle 12 UNCHE Declaration, and Principle 7 of the Rio Declaration which proclaims that ".. *In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development*"

125 **YbILC** (1980) Vol II (Part 2) at p 32

L. ADIL. JAV.

protection of fundamental interests of the international community that its breach is recognized as a crime by that community as a whole constitutes an international crime" (emphasis added) Article 19 (3) goes on to specify breaches which are considered to be an international crime and among these is " a serious breach of an international obligation of essential importance *for the safeguarding and preservation of the human environment, such as those prohibiting massive pollution of the atmosphere or of the seas*" (emphasis added).[126] However, Article 19 is highly controversial and the concept of international crime has been heavily criticized by various writers.[127] It has also been suggested that the constituent aspects of state responsibility as articulated in Article 19 do not fit into the legal definition of crime since it is erroneous to view breach of obligations *erga omnes* and peremptory norms as equivalent to international crimes.[128]

Another possible interpretation is that the recognition that the conservation of the global atmosphere is a common concern of mankind leads to the application of the principle of intergenerational equity.[129] While Principle 1 of the UNCHE Declaration and the recognition in the UNGA Res.43/53 that the global climate must be protected for present and future generations of mankind appear to support this interpretation, no institutions or procedures whereby the rights of future generations

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126 Other examples of situations that may give rise to international crimes include aggression, establishment or maintenance by force of colonial domination, slavery, genocide, and apartheid

127 I Brownlie, **System of the Law of Nations, State Responsibility**, Part I, Clarendon Press, Oxford, 1983, pp 32-4 , M N Shaw, **International Law**, 3rd edn , 1991, pp 484-5, According to Brownlie, the concept of international crime has little legal value "State responsibility, as a matter of law is, and in principle should be, limited to make reparation, to compensate". For a highly critical comment of the ILC's approach to the issue of State responsibility in general, see P Allot, *State Responsibility and the Unmaking of International Law*, 29 **Harv.ILJ** (1988) p 1

128 G. Gilbert, *The Criminal Responsibility of States*, 39 **ICLQ** (1990) p.345, at p 355

129 C Redgwell, *Intergenerational Equity and Global Warming*, in Churchill and Freestone (eds), **International Law and Global Climate Change**, *supra*, note 26, pp 41-56, at pp 51-2

may be effectively represented can be envisaged at present [130]

"Common concern" has also been seen as one facet of the broader concept of "common interest". According to this view, the term "common concern" comes into play when we are faced with common interest of such intensity or that is so compelling that it crystallizes into a rule of international law triggering specific duties.[131] The question remains, however, as to what is the content of these specific duties of states. In discussing the potential of existing international law for the protection of the atmosphere, one writer comments that the customary obligation of due diligence, even when formulated in a more elaborate manner in treaties, "does not itself give predictable or universally applicable standards for controlling greenhouse gases, ozone depletion or other causes of global climate change".[132] Thus, there are still two main tasks confronting the international community. First, there is a need to negotiate and adopt detailed "ecostandards" for atmospheric protection from all relevant sources. Secondly, it is necessary to provide for some enforcement mechanisms, preferably in the form of intergovernmental bodies, such as in the case of the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, to supervise compliance through monitoring and information gathering, periodic reporting and inspection procedures including the negotiation of further measures in order to provide detailed standards.[133] In addition, it is necessary to negotiate a multilateral treaty providing a firmer legal basis for states, no matter whether or not they have been injured, seeking standing to bring claims on the international plane.[134]

Though the concept of "common concern" has a long way to go before it makes any

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[130] See Boyle, *supra*, note 117, at pp 12-13
[131] Brunnée, *Common Interest*, *supra*, note 122, pp 794-96, 807
[132] Boyle, *supra*, note 117 , p 14
[133] *Ibid* , pp 15-19
[134] *Ibid* , p 17.

substantial impact on measures for environmental protection, the general view is that the concept should be welcomed and extended to areas other than the protection of the global atmosphere in order to achieve sustainable development.

2.5 People's Participation and Responsibility

The importance of people's participation in environmental protection has been recognized since the UNCHE. In the preamble of the UNCHE Declaration, it was stated that achievement of environmental goals "will demand the acceptance of responsibility by citizens and communities and by enterprises and institutions at every level, all sharing equitably in common efforts.....Local and national governments will bear the greatest burden for large-scale environmental policy and action within their jurisdictions ..". The principle of public or people's participation is brought out more clearly in the UNCED texts Principle 10 of the Rio Declaration acknowledges that environmental management requires the participation of all concerned citizens through greater involvement in decision-making, access to information and judicial and administrative proceedings Other Principles unique to the Rio Declaration are Principles 20 and 21. Principle 20 provides that:

> *Women have a vital role in environmental management and development Their full participation is therefore essential to achieve sustainable development*

The provision is rather general and has been criticized as vacuous However, it can be regarded as a first step towards recognition of women's role in environmental management. Agenda 21 elaborates upon means of promoting women's participation. It recommends that in order to ensure sustainable development, measures should be taken for women's empowerment and their full, equal and beneficial involvement in decision-making processes as well as their full participation as planners, managers, scientists and technical advisers in all activities related to environmental management and sustainable development. It also calls for ratification, implementation and review of the Convention on the Elimination of All Forms of Discrimination Against Women

to meet environmental and development objectives. Elimination of all "constitutional, legal, administrative, cultural, educational, social, behavioral and attitudinal obstacles" is considered essential to women's full participation in ecosystem management and sustainable development The enhancement of women's human resource capacities through their equal education and training at all levels is identified as a priority. Governments are urged to ensure that persistent negative images, stereotypes, prejudices and acts of violence against women are eliminated.[135]

In view of the subordination and sexual exploitation of women and children which still persists in Thailand, the action called for in the UNCED texts can be highly relevant. There is an urgent need to improve women's human resource capacities to enable them to participate in the development process as well as environmental management and to enact legal measures to this end.

Principle 22 provides for the role of indigenous people and their communities, as follows :

> *Indigenous people and their communities, and other local communities, have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.*

Again, this Principle has been criticized as being too vague and general because it was cast in terms which impose no obligation on states and there is no mention of inherent rights or right to political identity within the state.[136] However, Agenda 21 specifies further that governments and international bodies should establish processes to empower indigenous people in order that they may both share in the benefits of and contribute their traditional knowledge and experience to sustainable development

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135 Agenda 21, Chapter 24, para 24 3 (a)-(j)

136 R Khoshie Lal Panjabi, *From Stockholm to Rio : A Comparison of the Declaratory Principles of International Environmental Law*, 21 **Denver JILP** (1993) p 215, at p 272

The lands of indigenous people should be protected Their traditional values, knowledge and environmental resource management practices should be recognized and promoted as valuable contribution to sustainable development. Capacity-building for indigenous people and their communities should be enhanced and their active participation in the formulation of national policies, laws and programmes relating to resource management, conservation strategies and other development processes affecting them should be strengthened [137]

In considering the role of indigenous people and their communities, we should take into account the 1989 ILO Convention Concerning Indigenous and Tribal Peoples in Independent Countries.[138] This Convention is a revision of the 1957 Convention Concerning the Protection and Integration of Indigenous and Other Tribal and Semi-Tribal Populations in Independent Countries.[139] The marked difference between the two Conventions is that whereas the 1957 Convention provides for the gradual integration of indigenous peoples into the mainstream of modern society[140], the new Convention seeks to maintain their ways of life and identities [141] The 1989 Convention prescribes numerous duties for governments to take measures to protect the rights of indigenous peoples and guarantee respect for their integrity. These measures should include, for example, "safeguarding the persons, institutions, property, labour, cultures and environments of the peoples concerned" (Article 2); establishing "appropriate procedures" to enable the peoples to participate in decision-making (Article 6); "formulation, implementation and evaluation of plans and programmes for national and regional development which may affect them directly"

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137 Agenda 21, Chapter 26, para 26 3

138 ILO Convention 169, 28 ILM (1989) 1382 Not yet in force

139 1957 ILO Convention 107, 328 UNTS 247.

140 *Ibid*, Article 2 (1) provides that "governments must take action for the progressive integration of indigenous peoples into the life of their respective countries"

141 ILO Convention 169, *supra*, note 138, the Preamble of the Convention recognizes "the aspirations" of indigenous peoples "to exercise control over their own institutions, ways of life and economic development and to maintain and to develop their identities, languages and religions, within the framework of the states in which they live"

(Article 7); safeguarding their rights to the natural resources pertaining to their lands and "to participate in the use, management and conservation of these resources" (Article 15), and provision of education in indigenous language (Article 28)

In the light of all the obligations which the new Convention places on states, it is predictable that the Convention will not be well received by many countries, especially developing countries, which already find it difficult enough to provide adequately for their own people. Although the Convention includes tribal peoples within its scope, it is bound to have little application to various groups of tribal peoples who migrate from neighbouring countries in northern Thailand Several projects have been introduced to dissuade these peoples from destructive agricultural practices, destroying the forest areas and opium cultivation. Indeed, some resentment has been felt among the local people about the massive budget allocated to these projects. The obligations called for in the ILO Convention may therefore be too great to be implemented in Thailand.[142] While it may be equitable to provide special treatment to indigenous peoples by virtue of "their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of the present state boundaries", it is another thing to provide for tribal peoples who are considered as minorities that have moved from neighbouring countries. The Convention does not make this distinction, however.[143] Yet, the need to incorporate participation of tribal peoples in sustainable development cannot be overlooked. As envisaged by Agenda

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142 For instance, the Convention imposes an obligation on states to provide "more land for these peoples when they have not the area necessary for providing the essentials of a normal existence" (Article 19) This can hardly come true when a government cannot guarantee this even to its own people

143 The provisions in the Convention apply equally to both indigenous and tribal peoples Article 1 of the Convention describes them as peoples in independent countries "whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations".

21, promoting education and public awareness is crucial [144]

Apart from the participation of women and indigenous people, UNCED also recognized the importance of strengthening other major groups, namely children and youth,[145] farmers, NGOs, local authorities, workers and trade unions, business and industry and scientific and technical community.[146] Lack of space prevents detailed discussion but strengthening the role of all these groups is important in Thailand because environmental awareness is generally low amongst them

3. Related Rights

3.1 The Right to Development

The concept of sustainable development involves balancing environmental rights and principles with the right to development, concerning the scope and content and even the very existence of which there is much debate. Countering the growing demand for action at the global level for environmental protection, the arguments have been pressed, particularly by developing countries, that the necessary action must accommodate a right to development. From the developing countries' point of view, the industrialised developed countries, have created and benefited from the present environmental stresses without restriction and their patterns of consumption are major sources of pollution. Hence, they consider it unjust that their development should be restricted, especially as most have declining incomes under existing international economic relations.

The right to development has often been referred to as a right which belongs to a third

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144 Agenda 21, Chapter 23

145 Principle 21 of the Rio Declaration states in an aspirational term that "(t)he creativity, ideals and courage of the youth of the world should be mobilized to forge a global partnership in order to achieve sustainable development and ensure a better future for all" The principle is further discussed in Agenda 21, Chapter 25.

146 Agenda 21, Chapters 27-32

generation of rights This classification can be attributed to Karel Vasak who characterises these as "solidarity rights". They include the right to peace, to development or self-determination, and to an adequate or healthy environment, as well as the right to co-ownership of the common heritage of mankind.[147]

The right to development can be viewed as a part in the debate on establishment of the New International Economic Order (NIEO) which began in the 1960's, in the period of decolonisation. It had been recognised after World War II that there was a need to bridge the gap between the level of development in developed and developing countries. In 1962, the UN General Assembly adopted a Resolution on Permanent Sovereignty Over Natural Resources, considering it desirable "to promote international cooperation for the economic development of developing countries, and that economic and financial agreements between the developed and developing countries must be based on the principles of equality and of the right of peoples and nations to self-determination".[148] Another important Resolution was the Declaration on the Establishment of a New International Economic Order,[149] whose preamble recognises that "developing countries which constitute 70 per cent of the world's population account for only 30 per cent of the world's income". It states that the need to establish a NIEO to eliminate the widening gap between developed and developing countries. The Declaration lists twenty principles upon which it should be founded, including recognition of the full permanent sovereignty of every state over its natural

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147 M Galenkamp, **Individualism versus Collectivism, The Concept of Collective Rights**, Erasmus University, Rotterdam, 1993, at pp 31-33, citing Vasak According to Vasak, the first generation of human rights encompasses Western oriented "attributive" rights of human persons. These are the "rights to freedom", founded on the notion of liberty and consisting of civil and political rights The second generation of rights originated in the former socialist and communist Eastern bloc consists of economic, social and cultural rights These rights are predicated on the notion of equality. The rights of the third generation are propagated mainly from the perspective of Third World states, as "rights to solidarity and fraternity".

148 UNGA Res A/1803 (XVIII), December 14, 1962, 2 ILM (1963) 223

149 UNGA Res A 3201 (S-VI), May 1, 1974, 28 YUN (1974) 324

resources including marine resources and all economic activities, payment of fair prices for raw materials, products and commodities from developing countries, according preferential and non-reciprocal treatment for developing countries, providing access to science and technology for developing countries and recognising the need for developing countries to concentrate all their resources for the cause of development.[150]

Of particular importance is the General Assembly's Charter of Economic Rights and Duties[151] Its purposes, expressed in its Preamble include promoting the establishment of a new system of international economic relations based on "equity, sovereign equality and interdependence of the interests of developed and developing countries". The Charter reiterates "the sovereign and inalienable right" of every state to choose its own economic, political, social and cultural systems.[152] The full sovereignty of states over their wealth, natural resources and economic activities are again reaffirmed[153] This entails the right to regulate and exercise authority over foreign investment and the activities of transnational corporations within its national jurisdiction[154] Article 7 of the Charter provides directly for the right to development :

> *Every State has the primary responsibility to promote the economic, social and cultural development of its people. To this end, each State has the right and the responsibility to choose its means and goals of development, fully to mobilize and use its resources, to implement progressive economic and social reforms and to ensure the full participation of its people in the process and benefits of development All States have the duty, individually and*

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150 *Ibid*, Article 4 On the role of the principle of permanent sovereignty over natural resources at UNCED and its shifting role "from securing ownership and control to providing a rationale for technology transfer and global cooperation in resource utilization", see A Diaz, *Permanent Sovereignty Over Natural Resources*, 24 **EPL** (1994) p 157

151 UNGA Res A/3281 (XXIX), December 12, 1974, 14 **ILM** (1975) 251, 28 **YUN** (1974) 403. The Resolution was adopted by a vote of 120 in favour, 6 against and 10 abstentions Except for Australia, none of the developed countries cast a vote in favour of the Resolution

152 *Ibid*, Article 1

153 *Ibid*, Article 2

154 Article 2 (c) For discussion of its provisions on nationalisation, see Brownlie, **Principles of Public International Law**, *supra*, note 42, pp 531-545

collectively, to co-operate in order to eliminate obstacles that hinder such mobilization and use.

Other provisions in the Charter address the components of a more equitable world trading system and call for : a right to associate in organizations of primary commodity producers,[155] access to science and technology,[156] enlarging the system of generalized non-reciprocal and non-discriminatory tariff preferences to developing countries,[157] equitable sharing of the benefits derived from exploitation of the seabed, taking into account the particular interests and needs of developing countries.[158] On the whole, the Charter represents a more balanced approach than the NIEO Declaration which almost exclusively related to demands made to developed States The Rio Declaration can be regarded as the successor of the Charter in a yet more balanced form

However, the Charter, it is generally admitted, remains largely unimplemented, as evidenced by the fact that few governments responded to the request by the UN Secretary-General for assistance in the UN's preparation of a report on its implementation on the occasion of the tenth anniversary of its adoption [159] It is clear that the major reason for the developed states voting against the Charter at the outset was its provision relating to compensation for expropriated foreign property exclusively under domestic law instead of in accordance with international law.[160]

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155 *Ibid* , Article 5
156 *Ibid* , Article 13
157 *Ibid.*, Article 18
158 *Ibid* , Article 29
159 See M Bulajic, **Principles of International Development Law**, 2nd ed , Martinus Nijhoff, Dordrecht, 1993, pp 160-1. After two years of work on this report, the Secretary-General had received only 15 replies from member states Following a further request by the Economic and Social Council, ten additional states submitted replies
160 For analysis of the reasons why the CERD failed to gain the support of developed countries, see S K. Chatterjee, *The Charter of Economic Rights and Duties of States An Evaluation After 15 Years*, 40 **ICLQ** (1991) p 669 It is submitted, however, that except for Article 2 of the Charter which deals with payment of compensation in the event of nationalisation or expropriation of foreign property, there is a general acceptance of other uncontroversial provisions of the Charter which arguably possess some law-making capacity It is also pointed out that current state practice among developing countries shows that, contrary to the Charter, most countries still adhere to an obligation to pay "prompt, adequate

Following the debate on the right to development initiated by UNESCO, the issue of the existence of such a right was raised specifically for the first time in the UN Commission on Human Rights (UNCHR) in 1977. The UN Secretary-General was commissioned to undertake a study of the international dimensions of the right to development as a human right On completion of the this study, the UNCHR adopted a resolution confirming that the right to development was recognised as a human right. This view was approved by the General Assembly in November, 1979 [161] The right was reaffirmed by the General Assembly on several occasions from 1981 to 1984.[162] On each occasion, it was recognised that "the right to development is an inalienable right" and that "international peace and security are essential elements in achieving the full realisation of the right to development". It was also stated that "all human rights and fundamental freedoms are indivisible and interdependent".[163]

On 4 December, 1986, the UN General Assembly adopted the Declaration on the Right to Development [164] The central features of the right to development are reflected in its preamble as well as in its substantive provisions.[165] Of particular

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and effective" compensation for taking of foreign property

[161] UNGA Res 34/46, November 23, 1979, 33 YUN (1979) 865 The Resolution was adopted by a recorded vote of 136 to 1 (the U.S), with 7 abstentions The abstaining countries were Belgium, France, Germany, Israel, Luxembourg, Malawi, and the U K.

[162] UNGA Res. 36/133, December 14, 1981, 35 YUN (1981) 928 (adopted without a vote), UNGA Res 37/199 of 18 December, 1982, 36 YUN (1982) 1097 (recorded vote 104-1-24), and UNGA Res.39/145, 14 December, 1984, 38 YUN (1984) 838 (recorded vote 131-2-12) In voting against Res 39/145, the U S made a statement that it could not accept some provisions of the Resolution which might imply that establishment of the so-called NIEO was a prerequisite to the realization of human rights and fundamental freedoms Similar views were voiced by the FRG, Sweden and the Netherlands which also said that it was by no means clear what the content of NIEO would be.

[163] UNGA Res 37/199, 18 December, 1982, paras 7, 6, 8 and 12, and UNGA Res 39/145, 14 December, 1984, paras 8, 9 and 10

[164] UNGA Res 41/128, December 4, 1986, 40 YUN (1986) 717 The Resolution was adopted by a roll-call vote, 146 voted in favour, one against (U S A) and eight abstained (Denmark, Finland, Federal Republic of Germany, Iceland, Israel, Japan, Sweden and the United Kingdom)

[165] Among these are that the right to development is an inalienable human right, that it implies the full realization of the rights of people to self-determination, and that all human

relevance to this dissertation is the duty of states to take necessary measures at the national level for the realization of the right to development through ensuring "equality of opportunity for all in their access to basic resources, education, health services, food, housing, employment and the fair distribution of income".[166] The UN General Assembly Resolution is not strictly a legally binding instrument, especially as it did not attract consensus. However, as it had 146 votes in favour, its importance should not be underestimated. On the other hand, as the U S. was the only country voting against all these Resolutions, and abstaining countries were also mainly developed States, it can be argued that since establishment of the NIEO (which, from the point of view of developing States, is an integral part of the assertion of a right to development) will necessarily require transfer of resources and technology from developed countries, such persistent objection to and abstention on the affirmation of the right by developed countries, especially the US , constitutes evidence that the right to development cannot be said to have become part of customary international law

Apart from the Declaration, the right to development has often been said to have its legal basis in certain provisions in the so-called International Bill of Human Rights[167] as well as in Articles 55 and 56 of UN Charter.[168] The relevant

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rights and fundamental freedoms are indivisible and interdependent

166 *Ibid* , Article 8

167 The term "the International Bill of Human Rights" is usually used to refer collectively to the documents which constitute the UN international human right regime, namely the UN Charter, the Universal Declaration of Human Rights, and the International Covenants on Human Rights

168 The argument that UN Declarations or Resolutions can provide a legal basis for a right raises an important question relating to the legal status of these documents This is a topic which has been extensively debated by writers. See the range of views put forward by I MacGibbon, *Means for the Identification of International Law, General Assembly Resolutions . Custom Practice and Mistaken Identity*, in B Cheng (ed), **International Law : Teaching and Practices**, Stevens & Sons, London, 1982, pp 10-26 (General Assembly Resolutions constitute merely recommendations, and no intention to be bound can be derived from the mere fact of States' voting in favour Neither is a recommendation translated into a legal obligation simply by being reaffirmed or recited, no matter how many times), R Higgins, *The Identity of International Law*, in Cheng, *op cit* , pp 27-44, at p 28, and R

provisions from which the right to development is taken to flow from are Article 28 of the UN Universal Declaration of Human Rights[169] and Article 1 of both the International Covenants on Human Rights.[170] Moreover, it has been argued that the right to development is a corollary or an "inherent" and "built-in" right forming an inseparable part of the right to self-determination and since the right of peoples to self-determination is an essential principle of contemporary international law, the right to development should be regarded as part of the *jus cogens*.[171] It has further

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Higgins, **Problems and Process : International Law and How We Use It**, Clarendon Press, Oxford, 1994 (UN Resolutions, provided that they are clear, and represent a repeated practice over a sufficient length of time by the great majority of nations, can be treated as sources of international law), Charney, *supra*, note 42 See also Brownlie, *op cit* , note 42, at p 699 (acceptance of non-binding resolutions by a majority vote constitutes *evidence* of the opinions of governments in the widest forum for the expression of such opinions and resolutions which are framed as general principles can provide a basis for the progressive development of the law and the speeding consolidation of customary rules) On the role of UN general Assembly Resolutions in norm-creation in the areas of human rights, outer space and use of force, see C C. Joyner, *UN General Assembly Resolutions and International Law Rethinking the Contemporary Dynamics of Norm-Creation*, 11 **Cal.WILJ** (1981) p 445 UNGA Resolutions and Declarations can also be regarded as a form of "soft law" which has been regarded by many writers as playing an important role in the international law-making process, including that of international environmental law, see P-M Dupuy, *Soft law and the International Law of the Environment*, 12 **Mich. JIL** (1991) p 420, C M Chinkin, *The Challenge of Soft Law . Development and Change in International Law*, 38 **ICLQ** (1989) p 850 See also *the Nicaragua Case*, **ICJ Rep.** (1986) 14, where the ICJ held that the *opinio juris* of States with respect to the international law rule prohibiting the use of force could be deduced through the cumulative enunciation of the same rule by numerous non-binding resolutions

[169] *Universal Declaration of Human Rights*, UN Doc A/811, 1948, reprinted in I. Brownlie, **Basic Documents in International Law**, 4th edition, Clarendon Press, Oxford, 1995, pp 255-261 Article 28 provides that "(e)veryone is entitled to a social and international order in which the rights and freedoms set forth in this Declaration can be fully realized"

[170] International Covenant on Economic, Social and Cultural Rights, GA Res 2200, 21 UN GAOR Supp (No 16) at 49, UN Doc A/6316 (1966), reprinted in 6 **ILM** (1967) 360, International Covenant on Civil and Political Rights, GA Res 2200, 21 UN GAOR Supp (no 16) at 52, UN Doc A/6316 (1966), reprinted in 6 **ILM** (1967) 368 Article 1 of both Covenants provides as follows:

(1) All peoples have the right of self-determination By virtue of that right, they freely determine their political status and freely pursue their economic, social and cultural development

(2) All peoples may, for their own ends, freely dispose of their natural wealth and resources without prejudice to any obligations arising out of international economic cooperation, based upon the principle of mutual benefit, and international law In no case may a people be deprived of its own means of subsistence

[171] M Bedjaoui, *The Right to Development*, in M Bedjaoui (ed), **International Law : Achievements and Prospects**, Martinus Nijhoff Publishers, Dordrecht, 1991, Chapter 53, at

been suggested that the right to development is a principle of international law founded on the principles of the UN Charter, namely sovereign equality of states, non-discrimination, the principle of interdependence and of international cooperation [172] The view that the right to development is a principle of public international law is also endorsed in the International Law Association's Declaration on the Progressive Development of Principles of Public International Law Relating to a New International Economic Order known also as the Seoul Declaration.[173]

The concept of the right to development as a human right has been challenged and its alleged content criticized on a number of grounds. It has been argued that Article 28 of the Universal Declaration on Human Rights and Article 1 of both the Covenants on Human Rights provide insufficient legal basis to justify claims to a right to development.[174] and the Banjul Charter[175] which does provide specifically for the right to development is only of regional significance.[176]

However, more serious criticism seems to lie in the conceptual difficulty of identifying the subjects of the right to development Some confusion remains with regard to whether the right to development as a human right is a collective right or an individual right. The more widely held view is that it is both [177] In this regard, the

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pp 1184, 1193-4.

172 Judge Nagendra Singh, President of the International Court of Justice in his inaugural address to the seminar convened by the Free University of Amsterdam on 9 April, 1987, cited in M Bulajic, *A Changing World Calls For International Development Law*, in Petar Sarcevic and Hans van Houttee, (eds), **Legal Issues In International Trade**, Graham & Trotman / Martinus Nijhoff, London /Dordrecht /Boston, 1990,

173 Principle 6 of the Seoul Declaration, published in 12 **Civitas** (1986) pp 372-76, reproduced as annex in M Bulajic, **Principles of International Development Law**, *supra*, note 159

174 J Donnelly, *In Search of the Unicorn*, 15 **Cal.WILJ** (1985) p 473, at pp 484-86 According to Donnelly, the right to self-determination referred to in Article 1 of both Covenants is explicitly limited to a right of peoples to pursue development, and even though we can assume that development is necessary for the full enjoyment of the right to self-determination, it still does not follow that peoples have a right to development

175 O A U Doc CAB/LEG/67/3 Rev 5, reprinted in 21 ILM (1982) 58

176 Donnelly, *op cit* , note 174, p 487

177 See Bedjaoui, *The Right to Development*, *supra*, note 171, at p 1179 where it is argued that the beneficiaries of the right to development can only be both the individual in the state

text of the Declaration on the Right to Development seems to reject the notion that states are the beneficiaries of the right to development by stating clearly that the human person is the central subject of development and should be the active participant and beneficiary of the right to development. Another point of concern is the fear that the presentation of the right to development as a synthesis of all human rights would lead to the tendency to subordinate other existing human rights [178] On the other hand, it has been observed that positing the right to development as emerging initially from individuals' human rights obscures the real international aspects of the basic problem, that is the need to create more equitable North-South economic relations.[179] A more positive note is sounded by another commentator who considers that a better view is to regard the right to development as emerging from a synthesis of civil and political and the economic, social and cultural rights, thus bringing it together in a coherent whole the concept of human rights without according any priority to one set of rights over another. Viewed in this way, it is argued, the concept of the right to development does have the potential of improving the world's human rights situation.[180]

To a certain extent, the 1972 UNCHE Declaration recognizes the developing countries' right to development. Principle 9 of the Declaration acknowledges that "environmental deficiencies" are caused by conditions of underdevelopment which "can best be remedied by accelerated development through the transfer of substantial quantities of financial and technological assistance as a supplement to the domestic effort of the developing countries". The concern that higher environmental standards demanded by developed countries may have adverse effect on the development of

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and the state because in order to attain the ultimate goal, which is the development of the individual, the state must be able to assert its own people's right to development

178 P. Alston, *Conjuring Up New Human Rights . A Proposal for Quality Control*, 78 **AJIL** (1984) p 607, at p 613

179 Bedjaoui, *The Right to Development*, *supra*, note 171, p 1181.

180 D Shelton, *A Response To Donnelly and Alston*, 15 **Cal.WILJ** (1985) p 524, pp 526-27

developing countries is further reflected in Principle 11 where it is provided that "(t)he environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries ..". Similarly, the imperative of the right to development is specifically expounded in Principle 3 of the Rio Declaration where it is provided that "(t)he right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations". In addition, Principle 11 cautions against application of environmental standards which "may be inappropriate and of unwarranted economic and social cost" to developing countries in particular. Principle 12 also calls for "a supportive and open international economic system".

All this points to the unified stand of developing countries in asserting their right to development. This is likely to be the trend in the decades to come. In the light of this, the debate on the status of the right to development seems to be of limited significance Much depends on the political will of both the developed and developing countries. In the former case, it is the willingness to discharge their assumed responsibilities in providing the level of financial as well as technological assistance required to facilitate development in developing countries In the latter case, it is the willingness to accommodate environmental concerns into their development imperative, as part of the "common concern" that the concept of sustainable development expresses, taking account of the intergenerational equities also implied in it.

3.2 The Right to a Healthy Environment

The right to a healthy environment is relevant to the discussion of sustainable development concept because it brings out the need to balance economic development with environmental considerations Recognising a "right to environment" has been

perceived as fulfilling the need to protect nature for its own sake [181] but, more commonly, it is treated as a "cause" to be pursued for the benefit of mankind as a whole and as such it has often become a subject of the human rights debate [182] Different adjectives have been employed to set the standard of the right to environment, in particular, it is referred to as a "safe", "clean", "healthy" and "decent" environment. The right to a decent environment has been referred to in an OECD instrument as one of the fundamental rights recognized by states [183] According to one writer, "a decent environment" implies something less than a pure and clean environment It represents a minimum standard that is essential to the preservation of life at a realistic level of healthy existence, whereas absolute purity would be the maximum level that could not either politically or economically be realized.[184] Since the 1972 UNCHE, there has been increasing recognition of the right to a healthy environment in various international and national instruments, especially the latter There are now at least 50 countries which proclaim some kind of duty on the state to protect the environment for the benefit of its citizens [185] Most international instruments which provide for the right to a decent and healthy environment are those concluded after 1980 A fair amount of literature has also been generated concerning

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[181] See C. D Stone, *Should Trees Have Standing ? . Toward Legal Rights for Natural Objects*, 45 **SCal.LR** (1972) p 450

[182] See in general, R S Pathak, *The human rights system as a conceptual framework for environmental law*, and A A Cancado Trindade, *The contribution of international human rights law to environmental protection, with special reference to global environmental change*, in E B. Weiss, **Environmental Change and International Law**, *supra*, note 97, pp 205-243, and pp 244-312 respectively For analysis of the case law relating to the European Convention on Human Rights from human rights and environmental perspectives, see R Desgagne, *Integrating Environmental Values into the European Convention on Human Rights*, 89 **AJIL** (1995) p 263

[183] OECD, *Responsibility and Liability of States In Relation to Transfrontier Pollution*, reprinted in 13 **EPL** (1984) p 122

[184] P W Gormley, *The Right of Individuals to be Guaranteed a Pure, Clean and Decent Environment : Future Programs of the Council of Europe*, **Legal Issues in European Integration** (1975) p 23, at p 38

[185] See Weiss, **In Fairness to Future Generations**, *supra*, note 97, at p 297 onwards where constitutional provisions on environmental rights and duties of various states are listed

the existence of such a right.[186]

Like the right to development, the right to a decent or a healthy environment has been regarded by some writers as a right of a third generation. Some scholars contend that it has become a part of customary international law or even of *jus cogens*.[187] Another author regards the right to be secure against ecological hazards as one of the fundamental human rights.[188] It has also been viewed as a right corollary to and derivable from other existing human rights such as the right to life, right to health and right to food because fulfilment of these rights is possible only if the environment is preserved.[189] Further, it has been seen as vital to fulfilling the basic human need for existence and "the intragenerational manifestation of planetary rights" which represent the minimum interests shared by all generations.[190] It has also been said to be a precondition to the realization of economic, social and cultural rights in the future and thus inherent in recognizing the interests of future generations.[191]

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[186] See in general, P W. Gormley, **Human Rights and Environment : the Need for International Cooperation**, Leyden · Sijthoff, 1976, T Melissa, *Establishing Environment As A Human Right*, 19 **Denver JILP** (1990) 301, D Shelton, *Human Rights, Environmental Rights and the Right to Environment*, 28 **Stanford JIL.** (1991) p 103 (hereinafter Shelton, *Human Rights*), D Shelton, *What Happened in Rio to Human Rights*, 2 **YIEL** (1992) p 75

[187] Melissa, *supra*, note 186, pp 332-33, where she contends that since the right to life is universally recognized as *jus cogens*, so should the right to environment However, she prefers to confine this to the most serious instances, such as the deliberate destruction of the environment or ecocide that endangers life, the destruction of indigenous peoples and nuclear testing See also L Berat, *Defending the Right to a Healthy Environment · Toward a Crime of Geocide in International Law*, 11 **Boston UILJ** (1993) p 327, where the author argues that since the right to a healthy environment has been widely accepted in various international, regional and national instruments, and there is an urgency to avert a global environmental catastrophe, the right should be recognised as *jus cogens*, 338-9. The author further proposes the creation of a crime of geocide to cover conducts which are seriously destructive to the global environment, a Geocide Convention, and an international geocide tribunal, 340-8

[188] R A Falk, **Human Rights and State Sovereignty**, Holmes & Meier Publishers, New York . London, 1980, at p 167 where he likens ecocide to genocide, torture and other acknowledged gross abuse of human rights

[189] Melissa, *supra*, note 186, at pp 319-328

[190] Weiss, **In Fairness to Future Generations**, *supra*, note 97, at pp 116-17

[191] A Kiss & D Shelton, **International Environmental Law**, Graham & Trotman, Transnational Publishers Inc , U S A , 1991, p 22

As far as the legal basis of the right to environment is concerned, no global human rights instrument yet contains specific provision for the right to environment. It has been argued that the right is founded on certain provisions in the International Bill of Human Rights.[192] Article 3 of the Universal Declaration on Human Rights provides that "(e)veryone has the right to life, liberty and security of person". Further, Article 25(1) stipulates that "(e)veryone has a right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing ....". This similar provision is contained in Article 11 of the International Covenant on Economic, Social and Cultural Rights Article 12(2)(b) of the same Covenant also prescribes a duty for State parties to take steps for "the improvement of all aspects of environmental and industrial hygiene". With regard to the International Covenant on Civil and Political Rights, Article 6 provides that "(e)very human being has the inherent right to life ..".

Other than these provisions of the International Bill of Rights, the right to environment is embraced indirectly by the Stockholm Declaration Principle 1 of the Declaration provides that "(m)an has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well being, and he bears a solemn responsibility to protect and improve the environment for present and future generations...." Thus the Declaration treats protection of the human environment as a precondition of the well being of people [193] Though the UN General Assembly endorsed the Stockholm Declaration, it has never proclaimed the existence of a right to environment as such. After

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192 See *supra*, note 167.

193 For comments on the drafting of this principle, see L B. Sohn, *The Stockholm Declaration on the Human Environment*, 14 **Harvard ILJ** (1973) p 423, at pp 451-5 According to Sohn, the US had proposed a formula which would declare that "(e)very human being has a right to a healthy and safe environment, including air, water and earth, and to food and other material necessities, all of which should be sufficiently free of contamination and other elements which detract from the health and well-being of man". But this was not accepted by the participants at the Conference

Stockholm, the 1981 African Charter on Human and Peoples' Rights (the Banjul Charter) was the first human rights treaty to expressly recognize the right of all peoples to a generally "satisfactory environment favourable to their development".[194] More recently, the Protocol of San Salvador[195] imposes an obligation on the State Parties to take measures both at the domestic level and through international cooperation for the purpose of achieving observance of various rights, *inter alia*, the right to health and to a healthy environment. Article 11 of the Protocol provides that "(e)veryone shall have the right to live in a healthy environment and to have access to basic public services" and that "the State Parties shall promote the protection, preservation and improvement of the environment". Within the UN system, Article 24 of the 1989 Convention on the Rights of the Child,[196] refers to the right to environment indirectly in prescribing a duty for State Parties to "take appropriate measures" for the full implementation of "the right of the child to the enjoyment of the highest attainable standard of health...". Among the measures listed in Article 24(2) are those required "to combat disease and malnutrition, ... through, *inter alia*, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking water, taking into consideration the dangers and risks of environmental pollution". In addition, a reference to environmental protection is made in the ILO Convention Concerning Indigenous and Tribal Peoples in Independent Countries adopted in 1989.[197] The Convention does not grant a general right to environment but requires states to take special measures to safeguard the environment of indigenous peoples. Some provisions of international humanitarian law are also relevant in so far as they contain provisions to protect the environment Among these are international customary norms "which prohibit the

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[194] O A U Doc CAB/LEG/67/3 Rev 5, reprinted in 21 ILM (1982) 58, Article 24

[195] Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights, November 14, 1988, O A S T S. No 69, 28 ILM (1989) 156

[196] GA Res 44/25, November 20, 1989, UNGAOR 44th Sess ,
UN Doc a/Res/44/25, reprinted in 28 ILM (1989) 1448

[197] 28 ILM (1989) 1382

destruction of or damage to forests, orchards, fruit trees, or vines, and forbid the poisoning of wells, springs and rivers".[198] Furthermore, there are international agreements in this area which stipulate a general prohibition on causing environmental damage in time of armed conflict [199]

In formulating legal principles for environmental protection and sustainable development, the Experts Group on Environmental Law of WCED recommended a direct recognition of the right to an adequate environment in Principle 1 of its proposed principles for environmental protection and sustainable development, which provides that "(a)ll human beings have the fundamental right to an environment adequate for their health and well-being".[200] However, in their commentary on the Principle, the Experts Group observed that the fundamental right to an adequate environment cannot be said to have been constituted as a well-established right under present international law [201] The main objections to the creation of a right to environment seem to be that it is difficult both to define the precise content of the right and to establish the conceptual relationship between it and the existence of a human right. It has been argued that in serious cases of pollution, protection may already flow from the traditional human rights safeguarding life, well-being or property, thus making it unnecessary to invoke the protection of a new generation of

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198 Shelton, *Human Rights*, *supra*, note 186, at p 127.

199 For instance, the 1977 Protocols to the 1949 Geneva Conventions on the Laws of War proscribe "methods or means of warfare which are intended or may be expected to cause widespread, long-term and severe damage to the natural environment", 16 ILM (1977) 1391 and 1409, the 1977 Convention on Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques provides that each state "undertakes not to engage in military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State Party", 31 UST (1977) 333, Article 1 1, and the 1980 Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons which prohibits incendiary attack on forests or other kinds of plant cover, except when such natural elements are used to cover, conceal or camouflage combatants or other military objectives, or when the forests themselves become military objectives, 19 ILM (1980) 1525, Article 2 (4)

200 Lammers, *supra*, note 60, p 38

201 *Ibid* , p 40

human rights [202] Further, it has been observed that the promotion of a human right to a decent and healthy environment may reinforce the assumption that the environment and its natural resources exist only for human benefit, and have no intrinsic worth in themselves whereas international law has always recognized the intrinsic value of the environment, including natural ecosystems and species.[203] This is evidenced by a number of treaties such as the 1980 Convention on the Conservation of Antarctic Marine Living Resources,[204] the World Heritage Convention,[205] the Berne Convention on the Conservation of European Wildlife and Natural Habitats,[206] the Convention on International Trade in Endangered Species of Wild Fauna and Flora,[207] and several marine pollution agreements, as well as the World Charter for Nature. Therefore, the human rights arguments can be seen as "complementary" to a more comprehensive protection of the biosphere of which the interests of mankind form a part[208] and human rights institutions may not be appropriate for the task of supervision and balancing such polycentric interests.

On the other hand, it has been submitted that establishing a right to environment would place environmental protection on an equal level with other human rights for balancing purposes, rather than subordinating it to other human rights, such as the right to property [209] A more important problem, therefore, does not lie so much in identifying the content of the right to environment as in creating a procedure to ensure the implementation of this right.[210] Since environment can only be effectively conserved by preventive measures, the right would necessarily comprise resort to such measures as use of public hearings, injunctions, the right to be informed

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202 J Brunnée, *"Common Interest"*, *supra*, note 122, at p 799
203 Birnie and Boyle, *supra*, note 11, p 193
204 UKTS 48 (1982); 19 ILM (1980) 837 In force 7 April, 1981
205 UKTS 2 (1985), 11 ILM (1972) 1358 In force 17 December, 1975.
206 UKTS 56 (1982) In force 1 June, 1982
207 993 UNTS 243, UKTS 101 (1976), 12 ILM (1973) 1085. In force 1 July, 1975
208 Birnie and Boyle, *op cit*, pp 193-94
209 Shelton, *Human Rights, supra*, note 186, p 111
210 Kiss and Shelton, *supra*, note 191, pp 23-24

of projects or of programmes concerning the individual and his or her environment, public participation in decision-making processes affecting the environment, as well as the right to recourse before competent administrative and judicial organs to challenge decisions made or actions taken on the matter.[211]

The significance attached to the procedural aspects of the right to environment is supported by Birnie and Boyle who see that the most plausible interpretation of the right is that its content has the character of a procedural right which secures for individuals rights of access to information, to participation in decision-making processes and to administrative and judicial remedies [212] This approach is reflected in Principle 23 of the WCN[213] as well as in some modern treaties such as the 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources[214] and the 1991 Convention on Environmental Impact Assessment in a Transboundary Context [215] On this point, Principle 10 of the Rio Declaration provides specifically for public participation in environmental issues :

> *Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and*

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211 *Ibid* , pp 25-26

212 Birnie and Boyle, *supra*, note 11, p 194

213 Principle 23 of the WCN provides that *(a)ll persons, in accordance with their national legislation, shall have the opportunity to participate, individually or with others, in the formulation of decisions of direct concern to their environment, and shall have access to means of redress when their environment has sufferred damage or degradation*

214 See in particular Article 16(2) which provides that the Contracting Parties *shall circulate as widely as possible information on the significance of conservation measures and their relationship with sustainable development objectives, and shall, as far as possible, organize participation of the public in the planning and implementation of conservation measures*

215 30 ILM (1991) 800, Article 2(2) stipulate that *(e)ach Party shall take the necessary legal, administrative or other measures to implement the provisions of this Convention, including with respect to activities .. that are likely to cause significant adverse transboundary impact, the establishment of an environmental impact assessment procedure that permits public participation and preparation of the environmental impact assessment documentation*

encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

It is evident that this approach can only effectively be achieved through national legislation Thus, the increasing recognition of the right to environment in various countries' law is a trend which should be welcomed.

It is worth noting, however, that despite the trend evidenced since 1972 of moving towards a general acceptance of the links between human rights and environmental protection,[216] there is no explicit mention of the right to environment in the UNCED texts.[217] The Rio Declaration avoids using human rights language, although there is some reference to subjects contained in human rights instruments, such as eradicating poverty and decreasing the disparities in standards of living [218] Similarly, Agenda 21 has few references to human rights [219] Although public participation is emphasized both in the Rio Declaration and throughout Agenda 21, it is not recommended in term of human rights.[220] The absence of references to human rights in the Rio texts, including the right to environment, contrasts with developments that accord more recognition of the right in national legislation and treaties concluded since the 1972 Stockholm Conference. According to one writer, the omission was not inadvertent. In fact, proposals to include a right to environment were dropped only at the final preparatory commission session prior to Rio This was largely due to a lack of consensus and political will on the part of participating states,

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216 According to a recent review by one writer, however, of the case law relating to environmental protection under the European Convention for the Protection of Human Rights and Freedoms (signed 4 November 1950, entered into force 3 September, 1953, 213 UNTS 221, reprinted in Brownlie, **Basic Documents in International Law**, *supra*, note 169, pp 328-347), the right to environmental information and participation still receives little protection under the Convention, see Desgagne, *supra*, note 182, pp 285-294

217 Shelton, *What Happened in Rio to Human Rights ?*, *supra*, note 186, pp 82-83

218 Principle 5, Rio Declaration

219 Chapter 7.6 (the right to housing), Chapter 24, para 24 1 (right of women and indigenous people), Chapter 29, para 29 4 (rights of individual workers)

220 See for example, Chapter 2, para 2 36 (g) at 29, Chapter 3, para 3 8, at 34, and Chapter 38, para 38 in general

most of which considered that little could be gained from asserting such human rights. The controversy concerning the feasibility and desirability of such a right that had been evidenced in the debate among jurists also reinforced this.[221]

It can be concluded that at this point, the right to environment is still at a developmental stage and that it has not yet been accepted as a principle of customary international law. Some consider that the UN General Assembly could play a law-creating role in this regard As one writer observed, "in practice a claim is an international human right if the United Nations General Assembly says it is".[222] The general trend appears to indicate that there are likely to be increasing number of instruments, both at the national and the international levels, which will incorporate the right to environment in their texts. However, the limitation of the human rights approach noted above should be considered It is worth noting that simply enacting a right to environment in the substantive texts may not be very useful unless it is accompanied by procedural mechanism to ensure that the right can be enforced Thus, it is important that national laws provide access to information and promote public participation in decision-making processes affecting the environment, as well as providing for the rights of individuals, including non-governmental organizations, to have standing before competent administrative or judicial organs to challenge decisions causing or likely to cause adverse or damaging environmental impacts. As will be seen in Chapter 4, Thailand has introduced legislation covering all these elements, but it remains to be seen how far these can be actually enforced According to the first and the only test case to date on these issues, the prospect is not very promising (see Appendix IV)

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221 Shelton, *What Happened in Rio to Human Rights, supra*, note 186, pp 89-90

222 R. Bilder, *Rethinking International Human Rights*, 2 **Revue Des Droits de L'Homme (Human Rights Journal)**, (1969) 557 As previously noted, however, the argument that the UN General Assemble Resolutions have a law-creating role is still highly debatable, see *supra*, note 168

4. Conclusion

The precise content of the sustainable development concept is still open for debate and discussion In this chapter, an attempt has been made to identify some of the concepts, principles and issues associated with it, most of which are still evolving It remains problematic how far these concepts, principles and rights will be incorporated into laws, still less be implemented and enforced. An examination of the extent to which the concepts and principles discussed in this Chapter are embodied in the relevant rules and provisions of international environmental law will be made in Chapters 2 and 3 which focus on control of air pollution and the conservation of biodiversity respectively. Since the value of the concept of sustainable development also depends, in the final analysis, on how far, if at all, the concept can be implemented in a national context, especially that of developing countries, Chapters 4, 5 and 6 will present Thailand as a case study of a developing country purporting to achieve sustainable development. The choice of Thailand is appropriate since it represents one of the several countries in Southeast Asia which have been undergoing spectacular economic growth during the last decade and is projected to continue to do so during the next decade. As economic growth in the Southeast Asian region has generated substantial environmental problems which are in most cases transboundary and global in nature, a regional approach to the management of such problems is required. In this respect, the role of ASEAN will be discussed in Chapter 7. Furthermore, as ASEAN's environmental activities are still in a preliminary stage in term of its actual impact on regional cooperation in this matter, a general survey of the EC approach to environmental management will be made in Chapter 8 to see how far, if at all, the EC provides a model for ASEAN in this regard It is hoped that on the basis of these studies, recommendations for the effective implementation of the concept of sustainable development in the context of developing countries such as Thailand can be made, and some proposals on the way forward for the conservation of the global environment can be derived

CHAPTER 2

CURRENT INTERNATIONAL LEGAL DEVELOPMENT IN AIR POLLUTION CONTROL

This Chapter and the next Chapter will provide an overview of the recent international legal developments in the field of environmental protection with the aim of providing a broad framework within which the cross-sectoral implementation of sustainable development in Thailand can be discussed. As it is not possible to cover all the relevant international environmental instruments, only the existing global legal framework concerning the protection of the atmosphere and biological diversity will be examined, both of which are of particular interest and relevance to Thailand, particularly in view of the Conventions on Climate Change and Biodiversity adopted at UNCED. Due to the extensive range of studies that have already been carried out in the areas of marine pollution and the protection of marine resources, the issues relating to the marine environment will be excluded except so far as relevant to the above issues. Chapter 2 will thus survey the current international developments in air pollution control relevant to Thailand and the next those relating to conservation of biological diversity.

1. The Protection of the Atmosphere

The protection of the atmosphere involves interwoven problems of controlling air pollution, acid rain, depletion of the ozone layer and global climate change. All of these are caused by emission of pollutants such as carbon dioxide (CO_2), sulphur oxides (SO_X), nitrogen oxides (NO_X), as well as gases which specifically deplete the ozone layer such as chlorofluorocarbons (CFCs) and other ozone depleting substances. Some gases, such as CFCs, have both the effect of depleting the ozone layer and trapping heat leading to global warming The long-range transport of certain air pollutants is largely responsible for so-called "acid rain" which causes serious adverse environmental effects, such as lake and soil acidification as well as forest decline. From a broader perspective, problems of air pollution are also linked to deforestation Deforestation reduces the

Earth's absorptive capacities for harmful gases such as CO_2. The felling and burning of forests in itself also releases vast amount of CO_2. In addition, deforestation destroys natural habitats of plants and animals. Similarly, ozone depletion and global warming produce adverse effects on all living species. Thus, the pollution of the atmosphere inevitably has harmful effects on biological diversity.

2. Rules of International Law Applicable to Air Pollution[1]

The search for a balance between the sovereign right of a state to use its territory in whatever way it deems suitable and the right of another state, on the basis of its sovereignty, to be free from the infringements upon its territory caused by transboundary pollution has found its expression in the principle of good neighbourliness and the duty of due diligence, the essence of which means that no state is entitled to use its territory or permit it to be used in a way that would infringe upon the right of another state. The most quoted cases in support of these principles are the *Trail Smelter Arbitration*,[2] and the *Corfu Channel Case*[3] This principle has been confirmed by Principle 21 of the Stockholm Declaration and has long been considered a rule of customary international law. It has also been incorporated into the preamble and substantive provisions of various international instruments.[4]

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[1] See generally, Birnie and Boyle, *supra*, Chapter 1, note 11, pp 387-418, G Handl, Territorial Sovereignty and the Problem of Transnational Pollution, 69 **AJIL** (1975) p 501, G Handl, *National Uses of Transboundary Air Resources : the International Entitlement Issue Reconsidered*, 26 **NRJ** (1986) 405, C Flinterman, B Kwiatkowska, and J G Lammers, **Transboundary Air Pollution**, Martinus Nijhoff, Dordrecht/Boston/Lancaster, 1986 (hereinafter Flinterman et al), and F L Kirgis, *Technological Challenges to the Shared Environment : United States Practice*, 66 **AJIL** (1972) p 290.

[2] 33 **AJIL** (1939) p 182, 35 **AJIL** (1941) p 684 The famous passage most quoted as the formulation of the good neighbourliness principle is · ". .no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another country or to the properties or persons therein, when the case is of *serious consequences* and the injury is established by *clear and convincing evidence* (emphasis added)

[3] **ICJ Rep.** (1949) 1, the Court ruled that it was "every state's obligation not to allow knowingly its territory to be used contrary to the rights of other states".

[4] In the context of air pollution, see the preamble of the ECE Convention on LRTAP, Article 20 of the ASEAN Agreement on the Conservation of Nature and Natural Resources, the Preambles of the Vienna Convention for the Protection of the Ozone Layer and the UN Framework Convention on Climate Change

In determining the law applicable to the protection of the atmosphere, some consideration should be given to the status of the atmosphere in international law. It is not clear whether the atmosphere can be regarded as a "shared resource", to which the principle of equitable utilization of shared resources would apply.[5] No instrument or decided case provides a clear definition of the term[6] Even the UNEP Principles governing shared use of natural resources include no definition of what is to be considered a shared resource.[7] If the principle is applied to transboundary air pollution, it could mean that states are entitled to a reasonable and equitable share of the atmosphere's absorptive capacity; in other words, there is an obligation on states to limit and reduce transboundary fluxes of air pollutants and each state of origin has to bear an equitable share of the necessary reductions.[8] Procedural rules involving the duties of cooperation, information and consultation as well as making environmental assessment of activities having impact on a shared natural resource are also particularly important

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[5] This principle was first developed with respect to shared use of international watercourses The earliest manifestation of the principle is the *River Oder Case* (1929) **PICJ** Ser A, No 23, at p 27 where the Court stated that the "community of interest in a navigable river becomes the basis of a common legal right, the essential features of which are the perfect equality of all riparian States in the user of the whole course of the river and the exclusion of any preferential privilege of any one riparian State in relation to the others " On the same line, in the *Lac Lanoux Arbitration*, 24 **ILR** (1957) 101, the arbitrator held that although Spain could not put forward its territorial integrity to oppose a French water diversion project, France had a duty to take into consideration Spain's interests when making use of the border crossing waters which is a shared resource. The principle of equitable utilization has subsequently been elaborated by the Helsinki Rules

[6] It has been submitted by one writer that any infliction of significant transboundary environmentally harmful effects ought to be considered to reflect an inequitable use of the internationally shared natural resource, see Handl, *National Uses of Transboundary Air Resources* ., *supra*, note 1, p 426

[7] UNEP Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, Decision 6/14 of the Governing Council of UNEP, 19 May 1978 Principle 1 of the UNEP Principles states that ".....it is necessary that consistent with the concept of equitable utilization of shared natural resources, States co-operate with a view to controlling, preventing, reducing or eliminating adverse environmental effects which may result from the utilization of such resources . ".

[8] J Brunnée, **Acid Rain and Ozone Layer Depletion : International Law and Regulation**, Transnational Publishers, Inc , Dobbs Ferry, New York, 1988, pp 137-8

given the broad character of existing substantive rules.[9]

The shared resources concept, though applicable to a certain extent to the acid rain problems, is of less use when considering atmospheric issues such as ozone depletion or climate change.[10] The United Nations General Assembly has on a number of occasions declared that "climate change is a common concern of mankind".[11] The Resolutions do not categorise the global atmosphere as common property but the concept of "common concern" implies that the atmosphere can be treated as a global unity the preservation of which is a legitimate concern of the international community, overriding the reserved domain of domestic jurisdiction or the possible contention that it relates to matters solely within the exclusive sovereignty of individual states.[12] However, as pointed out by Boyle, the existing customary international law concepts are of little assistance in the determination of the legal status of the atmosphere. Neither are they sufficient to give rise to meaningful obligations concerning the control of emission of greenhouse gases into the atmosphere.[13] Thus, there is a need to develop more detailed standards and appropriate mechanisms through treaties to ensure compliance, as well as enough flexibility for development in response to future needs.[14] Some development along these lines can be seen in the approach taken by the Montreal Protocol on Substances that Deplete the Ozone Layer.

3. The 1979 ECE Convention on Long-Range Transboundary Air Pollution

The Convention on Long-Range Transboundary Air Pollution[15] was the first multilateral convention in the field of air pollution control. It is also the first

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9 See the UNEP Principles, Principles 4-9
10 Birnie and Boyle, *supra*, note 1, p 390
11 UNGA Res 43/53, 6 December, 1988 and UNGA Res 44/207, 22 December, 1989
12 A Boyle, *International Law and the Protection of the Global Climate Change*, *supra*, Chapter 1, note 117, p 11.
13 *Ibid*, pp 13-5
14 *Ibid*, p.19.
15 UKTS 57 (1983); 18 ILM (1979) 1442 See in general, A. Tollan, *The Convention on Long-Range Transboundary Air Pollution*, 19 JWT (1985) p 615.

Convention on environmental protection in which almost all states from Western and Eastern Europe as well as from Northern America participate.[16] After two years of difficult negotiations, the Convention was adopted on 13 November, 1979 Thirty-five states signed the Convention and it finally received the required number of 24 ratifications to enter into force on March 16, 1983.

At first the Convention was regarded as a weak one, disappointing environmentalists, because it was largely a framework Convention containing neither numerical reduction goals for emissions of certain pollutants, nor a time frame within which reductions had to be achieved. Obligations and air quality management requirements are described in general terms only. The principal substantive provisions are contained in Articles 2 and 6. Article 2 provides that the Parties, "taking due account of *the facts and problems involved*, are determined to protect man and his environment against air pollution and *shall endeavour* to limit and, *as far as possible, gradually* reduce and prevent air pollution including long-range transboundary air pollution" (emphasis added). It has been observed that what is obligatory under this Article is the promise to try to limit air pollution and even this is qualified by many "escape clauses".[17]

Similarly, Article 6 combines almost all possible "escape clauses" in a compact way. It provides that :

> Each Contracting Party "taking into account ....*the cost and effectiveness of local and other remedies* and, in order to combat air pollution, in particular that *originating from new or rebuilt installations*,....undertakes to develop the best policies and strategies including air quality management systems, and control measures compatible with *balanced development*, in particular by using the best available technology which is *economically feasible* and low- and non-waste

16 L. Gundling, *Multilateral Co-Operation of States Under the ECE Convention on Long-Range Transboundary Air Pollution*, in Flinterman et al, *supra*, note 1, at p 19 The Convention was the result of the efforts made by the Scandinavian States which are the major recipients of the adverse effects of long-range transport of air pollutants (LRTAP) and acid rain Their earlier attempts to make LRTAP an issue at UNCHE had been unsuccessful due to opposition from states emitting this form of pollution, such as Federal Republic of Germany, United Kingdom and France

17 *Ibid* , p 22.

technology" (emphasis added).

The provision does not give any incentive to states to adopt control measures which strictly limit and effectively prevent air pollution. Rather, it offers a variety of possible ways to act so as not to harm existing economic structures.[18] The Article specifically mentions "new or rebuilt installations" as a target for measures impliedly excluding older installations which generally are the greater sources of harmful emissions.[19]

The procedural provisions in the Convention are more promising. Article 4 provides for a duty to exchange information on and review the parties' policies, activities and measures "aimed at combating , as far as possible, the discharge of air pollutants which have adverse effects, thereby contributing to the reduction of air pollution....". Further, Article 5 stipulates that consultations have to be held, "upon request" at an early stage between, on the one hand, states which are "*actually affected* by or exposed to *a significant risk* of long-range transboundary air pollution" (emphasis added) and, on the other hand, states within which a significant contribution to long-range transboundary air pollution originates or could originate. Problems remain, however, concerning how to determine when a state is actually affected and at what point a significant risk can be said to have occurred. In addition, a country anticipating harm must initiate a request for consultation with the polluting country. This request is unlikely to be honoured unless the latter admits that its activities pose "significant risk".[20] While Article 8 provides in more detail for the subject matters which the exchange of information is to cover, such as data on emissions of agreed air pollutants, control technologies, national policies and strategies, it is worth noting that they are restricted to "available information" only. This provides enough room for the parties to avoid supplying information they do not wish to share.[21]

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18 *Ibid.*

19 Brunnée, *supra*, note 8, p 177

20 A Rosencranz, *The ECE Convention of 1979 on Long-Range Transboundary Air Pollution*, 75 AJIL (1981) p 975, at p 980

21 Brunnée, *supra*, note 8, p 179

As far as institutional arrangements are concerned, the Convention designates the Executive Body, constituted within the framework of the Senior Advisors to ECE Governments on Environmental Problems as the body to review to review and supervise the implementation of the Convention.[22] The Executive Body has to meet annually. The existence of a forum in which further negotiation of more protective and positive measures could take place has allowed for considerable strengthening of the Convention by adoption of target setting Protocols, though again, not at a pace or of a strictness that environmentalists advocate.

At its Second Session in 1984, a Protocol on Long-Term Financing of the European Monitoring and Evaluation Program (EMEP) was adopted[23] At its Third Session in July, 1985, the Executive Body adopted a Protocol on the Reduction of Sulphur Emissions or Their Transboundary Fluxes by at least 30%.[24] This required the Parties to reduce emissions or their transboundary fluxes of sulphur by 30 per cent by 1993, using 1980 levels as the basis for calculation of reduction.[25] This Protocol came into force on September 2, 1987. Although the Protocol has been criticised for its weak mechanism for monitoring compliance,[26] it is generally agreed that it has succeeded in

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22 Article 10

23 24 **ILM** (1985) 484 EMEP was originally called the Global Environmental Monitoring System (GEMS), a unit of UNEP which was established in 1977 to monitor the flows of sulphur dioxide across national borders The GEMS monitoring network came to be called the European Monitoring and Evaluation Program (EMEP) EMEP operates under ECE auspices Today, there are around 95 sampling stations of EMEP in 24 countries within the EMEP monitoring network

24 27 **ILM** (1988) 707

25 The selection of thirty percent as a target and 1980 as a base year was entirely arbitrary Besides, as it is total national emissions which must be reduced by 30%, emissions which have more transboundary impact may not be those which a country choose to reduce See A A Fraenkel, *The Convention on Long-Range Transboundary Air Pollution Meeting the Challenge of International Cooperation*, 30 **Harvard ILJ** (1989) p 447, at p 470

26 See P. Széll, *The Development of Multilateral Mechanisms for Monitoring Compliance*, in W. Lang (ed), **Sustainable Development and International Law**, Graham & Trotman / Martinus Nijhoff, London/Dordrecht/Boston, 1995, pp 97-109, at pp 97-98. The reporting requirement of the Protocol was considered to be inadequate because it gave no power to the Executive Body to carry out objective verification of the data contained in the national reports Besides, in the unlikely event that a Party complains of Protocol breaches by others, such action is likely to be thwarted by the lack of scientific or technical data, or cooperation on the part of the accused Party

reducing SO_2 emissions substantially. The three major producers of sulphur dioxide pollution, the U.S., U K. and Poland have so far refused to ratify the Protocol [27] The Nitrogen Oxides Protocol was the next to be concluded in 1988, it required Parties to stabilize their NO_x emissions or their transboundary fluxes at 1987 levels by 1994.[28] The NO_x Protocol is said to be more sophisticated and more suited to regional environmental protection than the SO_2 Protocol.[29] Although the former did not require immediate reductions, it introduced a "critical loadings approach",[30] whereby acceptable levels of pollution can be determined and further reductions can be subsequently negotiated. Another Protocol concerning the control of emissions of volatile organic compounds or their transboundary fluxes was further concluded in 1991,[31] and the second sulphur emissions Protocol was adopted at a special session of the Executive Body in Oslo in June 1994.[32]

Although the Convention has been heavily criticized for its weaknesses in failing initially to impose any concrete obligations on the parties,[33] most writers now agree that

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[27] See Birnie and Boyle, *supra*, note 1, p 400 At its seventh meeting in 1989, the Executive Body decided to interpret the Protocol as requiring that the reduced emissions levels should be maintained or further reduced after 1993

[28] 28 **ILM** (1989) 212, 18 **EPL** (1988) pp 52 and 228

[29] See Birnie and Boyle, *supra*, note 1, pp 400-1. For instance, the NO_x Protocol requires use of best available technology for national emissions standards, and the eventual negotiation of internationally accepted "critical loads" for NO_x to come into effect after 1996, rather than providing for a flat-rate emissions reductions as in the case of the SO_2 Protocol See also Fraenkel, *supra*, note 25, pp 472-5

[30] "Critical levels" is defined by Art 1 (7) of the NO_x Protocol as "a quantitative estimate of the exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge"

[31] 31 **ILM** (1992) 568

[32] See 24 **EPL** (1994) p 231 Like the first SO_2 Protocol, the emission levels of 1980 are taken as the base However, a "critical load" approach is used and each State's individual capacity to reduce SO_2 effectively is taken into account ranging from 30% to 87% of the 1980 emissions

[33] It was even observed that the Convention was " the perfect solution to the victim countries' need for international recognition of the acid rain problem and the polluting countries' need to continue to pollute", see Rosencranz, *supra*, note 20, p 980 But see also A Rosencranz, *The Acid Rain Controversy in Europe and North America . A Political Analysis*, in J E Carroll (ed), **International Environmental Diplomacy**, Cambridge University Press, Cambridge/New York/Port Chester/Melbourne/Sydney, 1988, pp 173-185, where the same author considers that the Convention has brought benefits to its Parties and an increasing number of Parties have become convinced that the "benefits of abatement" do outweigh the costs

the Convention must not be seen as an isolated event but as a first step in the process of co-operation which offers the opportunity to further develop the initial broad obligations into more subsequent concrete measures. The Protocols which have been adopted since the Convention came into force indicate that the Convention indeed has this potential [34] These Protocols have facilitated adoption of legislation by the EEC and its member States [35] Viewed in this way, the Convention can serve as a model for initiating regional co-operation on a gradualist basis in other regions including ASEAN. Institution of a forum for negotiation of further measures within a broad framework of obligation is clearly a key development.

As far as the ASEAN region is concerned, though ASEAN States are not parties to it, the ECE Convention points up the gaps in the regional co-operation in the field of environmental protection in this region that is vital to combating air pollution. Due to rapid industrialization and urbanization, severe air pollution problems have emerged in the region.[36] It is hard to determine, on the basis of available information, whether the inertia in the region in combating air pollution is because there are no long-range air pollution problems or whether it is due to lack of awareness arising from lack of information through monitoring The rapid pace of economic development in the region and the resulting environmental deterioration provide clear indication (following the European model) that the transboundary air pollution is likely to become, if it has not already done so, a serious problem in the future. Learning from the developed countries' experience that it is more difficult and expensive to remedy environmental damage once it has occurred than to prevent it, it might be advisable for the ASEAN countries to take action now, before the environment deteriorate further and the problems of restoring it

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[34] It is generally agreed that even the SO_2 Protocol which was heavily criticized has brought about real reduction in emissions

[35] Birnie and Boyle, *supra*, note 1, p 401, cite as examples, the EEC Council Directives 88/609, 88/76, 88/436, 88/458 and the U K. Environmental Protection Act of 1990

[36] See ESCAP, **State of the Environment in Asia and Pacific**, ESCAP, Bangkok, 1990, and M. Seda (ed), **Environmental Management in ASEAN : Perspectives on Critical Regional Issues**, Institute of Southeast Asian Studies, Singapore, 1993

increase. To date, the only binding environmental treaty in the region is the ASEAN Agreement on the Conservation of Nature and Natural Resources concluded in 1985 This Agreement has been regarded as a comprehensive environmental instrument which incorporates modern approaches to environmental protection and addresses cross-sectoral issues. However, its provisions concerning air pollution are not as detailed as those dealing with conservation of species, soil and vegetation. Article 9 provides in general terms that the Parties "shall..... *endeavour* to take *all appropriate measures* towards air quality management *compatible with sustainable development*" (emphasis added). More specific is Article 11 which stipulates the duty to "prevent, reduce and control" polluting discharges and emissions through measures such as making controls conditional upon appropriate treatment of polluting emissions and establishing national environmental quality monitoring programmes. In addition, Article 19 provides for the duty to co-operate concerning conservation and harmonious utilization of shared resources, which could possibly cover air resources

Despite its far reaching forward looking language, the ASEAN Agreement has not entered into force. The fact that, since its ratification by three ASEAN member countries, i e. Thailand, Indonesia and the Philippines in 1986, no additional member countries have ratified it makes it highly unlikely that it will ever attain the six ratifications needed in the future. This reflects the existing limited appreciation of common interests and of the need for co-operation in environmental management in the region. International aspirations are not enough to achieve progress on this problem without the necessary commitments and environmental consciousness at the national level.

4. Rules of International Law Applicable to the Protection of the Ozone Layer

Scientists are generally agreed that the stratospheric ozone layer has two important functions which affect life on earth. First, it plays a major part in the control of the terrestrial climate by absorbing some of the ultraviolet radiation and thus providing the

heat necessary to maintain the stability of the stratosphere. Secondly, there is evidence that the ozone layer acts as a shield to filter ultraviolet (UV-B) radiation which potentially has harmful effects not only on human health, but also on many varieties of terrestrial and aquatic plants. Scientists estimate that for every one percent of depletion of the ozone layer, UV-B radiation will increase by two percent.[37] The increased ultraviolet radiation levels may induce certain types of skin cancer, cause cataracts and suppress human immune systems throughout the world.[38] Further, UV-B radiation can adversely affect certain plants or crops [39] Experiments which simulated ozone depletion of 5-25% have demonstrated harmful effects on fish, larvae of crab and shrimp, zooplankton, and plants essential to the aquatic food chain [40]

The first landmark report supporting the theory of ozone destruction was a work

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[37] Brunnée, *supra*, note 8, p 43

[38] According to a report released by a panel of scientists involved in UNEP studies on the detrimental effects of ozone depletion in 1991, the increased radiation will cause 1 6 million additional cases of cataracts a year and 300,000 new skin cancers worldwide Also, outbreaks of infectious diseases such as measles, herpes, and tuberculosis are expected to occur more frequently and with greater severity because increased radiation weakens human immune systems See M M Pinkham, *The Montreal Protocol · An Effort to Protect the Ozone Layer*, 15 **Suffolk TLJ** (1991) p 255, at p 259 Some doubts have been raised, however, as to whether a decrease in the ozone layer is responsible for the recent increase in the incidence of skin cancers in the US since such cancers take decades to develop Nevertheless, future ozone depletion could have serious consequences The US EPA estimated that there could be over 150 million new cases of skin cancer in the US alone among people currently alive or born by the year 2075, resulting in over 3 million deaths EPA also projected 18 million additional eye cataract cases in the US, many of which would result in blindness R E Benedick, **Ozone Diplomacy**, Harvard University Press, Cambridge, Massachusetts, London, 1991, p 21. Such studies, if correct, have serious implications for Thailand and the ASEAN region in general, see also, *infra*, notes 39 and 40

[39] For crops, it is estimated that increased UV-B irradiance and formation of photochemical oxidants could cause yield reductions For an assumed ozone depletion of 7 5% in the year 2025, yield reductions for corn, wheat, soybeans and cotton are estimated to be 1 5%, 1 4%, 2 8% and 3 3% respectively See Brunnee, *supra*, note 8, p 45.

[40] *Ibid* , pp 45-6 Measurements show that solar UV-B radiation has impact down to depths between 5 metres and more in unclear, and more than 20 metres in clear water It is in this range that a large portion of aquatic organisms are found Most phytoplankton populates the surface zones With increasing UV-B radiation, these organisms would move downwards so as to reduce their exposure As a result, there would also be a reduction in light necessary for phytosynthesis and consequently in phytoplankton productivity This would eventually affect the stability of the complex and interwoven ecosystems with adverse effects on all larger aquatic species

published in 1974 by two U.S scientists, Molina and Rowland, on the harmful effects of certain chemicals on the stratospheric ozone.[41] Since then, much has been learned about the process of ozone depletion. It is now generally accepted that stratospheric ozone is constantly created, destroyed and recreated in the upper part of the atmosphere or the stratosphere. The emissions of chlorofluorocarbons (CFCs) and other gases such as methane, nitrogen oxides, bromine compounds and other ozone-depleting substances alter the balance of these natural cycles of creation and destruction.[42]

Despite continuing scientific uncertainty, subsequent research has yielded troubling results about ozone depletion In 1986, WMO and UNEP published a report of one of the most comprehensive studies of the stratosphere.[43] A major finding of the report was that accumulations of CFC-11 and 12 in the atmosphere had nearly doubled from 1975 through 1985.[44] It predicted that continued emissions of CFC-11 and 12 at the 1980 rate could reduce the ozone layer by about 9% on a global average by the last half of the twenty-first century, with even greater seasonal and latitudinal declines.[45] The findings

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41 M J Molina & F S Rowland, *Stratospheric Sink for Chlorofluoromethanes : Chlorine Atomc-Atalyzed Destruction of Ozone*, 249 **Nature** (1974) p 810

42 Brunnée, *supra*, note 8, pp 36-38, CFCs are man-made chemicals developed in 1930 by the American DuPont de Nemours Company They are widely used in industry for the production of a wide range of consumer goods because they are chemically stable, non-corrosive, non-flammable, and pose less of a potential health hazard than other chemicals used for similar applications CFC-11 is used to make plastic foam for car seats and styrofoam containers, CFC-12 is used in refrigerators and air conditioners, and CFC-113 is used as a solvent to clean electronic equipment and computer chips Of all these, CFC-11 and CFC-12 are most important and their overall use increases by 5-7% per year, see also Chapter 4, CFC-113 is the most widely used ozone depleting substance (ODS) in Thailand, followed by CFC-12. When ultraviolet radiation breaks down CFCs, chlorine is released Chlorine is the true cause of ozone depletion because it catalyses the ozone destruction process The chemical stability of CFCs which makes them advantageous for industrial use also makes them harmful to the atmosphere Because of their long atmospheric lifetime of 75-150 years and their slow vertical transportation, CFC concentrations are subject to time lag and accumulation effects It also means that there will be a significant time lag between emission reductions and progress in replenishing the ozone layer.

43 WMO, *Atmospheric Ozone 1985 : Assessment of Our Understanding of the Processes Controlling Its Present Distribution and Change*, Geneva, 1986, cited in Benedick, *supra*, note 38, pp 14-15 The research was initiated in late 1984, involving approximately 150 scientists from various countries for over a year

44 *Ibid*, ch 13

45 *Ibid*, pp 786-87

confirmed that CFCs were thousands of times more powerful than carbon dioxide in their heat trapping capability and therefore could significantly aggravate the greenhouse warming effect.[46] Further, the study indicated that the ozone layer was threatened not only by CFC-11 and 12, but also by other fully halogenated alkanes, which included CFC-113, 114 and 115 and two bromine compounds, halons 1211 and 1301.[47] In addition, the discovery of the ozone hole in the Antarctic by several scientists since 1985 helped to heighten public attention on the need to protect the atmosphere [48] However, the scientific community was still divided with regard to the primary role of CFCs in the decrease of the ozone level.[49] It was against this background that the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer were negotiated

4.1 The 1985 Vienna Convention for the Protection of the Ozone Layer[50]

The Vienna Convention was the second multilateral agreement devoted entirely to air pollution control and the first to deal with the problem of ozone depletion The general language of the Convention did not bind the parties to any requirements for diminishing harmful CFC Production or consumption [51] It called upon parties to cooperate in the formulation of agreed measures, procedures and standards for the implementation of the Convention.[52] It also provided in general terms for obligations to co-operate in ozone

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[46] *Ibid*, ch 15

[47] *Ibid*, ch 12

[48] The first discovery was made by British scientists in Antarctica in 1985 They found that ozone levels recorded during springtime had fallen to about 50 percent lower than the 1960's levels The "ozone hole" had also expanded by 1985 to cover an area greater in size than the United States Their findings were subsequently confirmed by Japanese and U.S. scientists See Benedick, **Ozone Diplomacy**, *supra*, note 38, pp 18-19

[49] *Ibid*

[50] **UKTS** 1 (1990), 26 **ILM** (1987) 1529

[51] Because of the disagreement between the "Toronto Group" (the U S , Canada, Finland, Norway and Sweden) which advocated an 80% reduction in the use of CFCs over a six year period, and the EC, which favoured less demanding reduction obligations, the Convention failed to adopt any concrete provisions for controlling CFCs S C. Massey, *Global Warming - International Environmental Agreements - the 1992 UNCED Most Likely Will Not Culminate in a Successful Preventive Global Warming Treaty without the U S Support*, 22 **Georgia JICL** (1992) p 175, at p 186

[52] Article 2 (2) (c)

research and exchange of information for the implementation of the Convention [53] Any obligations to pay special consideration to the needs of the developing countries were spelled out in such ambiguous terms that it is difficult to derive any meaningful obligations on the developed parties [54] The major importance of the Vienna Convention lies, therefore, in the fact that, as in the case of the LRTAP Convention, it provides a framework within which the subsequent Montreal Protocol was developed Also, it was one of the first treaties which perceived the need for the taking of preventive action in advance of firm proof of actual harm, which is indicative of the emergence of the "precautionary approach" or "principle".[55]

4.2 The 1987 Montreal Protocol on Substances that Deplete the Ozone Layer[56]

The discovery of an ozone hole just a few months after the conclusion of the Vienna Convention attracted great public attention and returned the depletion of the ozone layer to the top of many countries' political agenda. The Protocol was adopted on 16 September, 1987 and entered into force on 1 January, 1989.[57] The Protocol is, by far, more important than the Convention itself. For the first time, it set specific emission reduction targets for CFCs and halons which are ozone depleting substances. It provided that each Party must reduce its consumption[58] and production of CFCs to 1986 levels by 1 July, 1989. Further, the Parties are required to reduce the consumption and production of CFCs by an additional twenty percent by 1 July, 1993 and another

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53 Articles 3, 4 and 5.

54 For instance, Article 4 (2) stipulates a duty to co-operate to facilitate the acquisition of "alternative technologies" and provision of information on alternative technologies

55 Birnie and Boyle, *supra*, note 1 , p 406

56 **UKTS** 19 (1990), 26 **ILM** (1987) 1550

57 According to Article 16 of the Protocol, the instrument must have acquired at least 11 ratifications, representing at least two-thirds of 1986 estimated global consumption of the controlled substances for entry into force

58 The formula for calculating consumption is explained in production plus imports minus exports of controlled substances, Article 1 (6). However, from 1 January, 1993, exports to non-Parties cannot be subtracted in calculating the consumption level of exporting Party, Article 3 (c) This provision is a compromise on the initial proposal for an outright ban on CFC exports to non-Parties and was intended to put pressure on importing countries to join the Protocol in order to maintain their supply, Benedick, *supra*, note 38, p 91

thirty percent by 1 July, 1998 [59] For halons, the consumption and production levels must be frozen at the 1986 levels beginning on 1 January, 1992 [60] At each reduction stage, national production was permitted to be higher, by up to ten to fifteen percent, in order to satisfy "the basic domestic needs" of the Parties and for the purposes of "industrial rationalization" between Parties [61]

Notably innovatory special provisions were designed to encourage developing countries to participate in the Protocol. The participation of developing countries is seen to be crucial for the success of the Protocol.[62] Article 5 allows those developing countries whose annual calculated level of consumption of the controlled substances is less than 0.3 kilograms per capita to delay compliance with the control measures set out in the Protocol by ten years.[63] The developed countries also undertake to facilitate access to

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[59] Article 2 (1), (3) and (4). Therefore, by 1998, the parties' production and consumption will be reduced by a total of 50% based on 1986 levels The automatic 20 percent CFC reduction would commence with the 12-month period beginning 1 July, 1993, regardless of when the treaty entered into force The additional 30 percent CFC reduction would take effect with the 12-month period beginning 1 July, 1998 unless reversed by a two-thirds majority of parties representing at least two-thirds of total consumption The fixed anchor dates for the two reductions removed the temptation for any governments to stall the protocol's enactment in hopes of delaying the cutbacks See Benedick, *supra*, note 38, at pp 87-88

[60] Article 2 (2)

[61] It has been argued that the rationale behind these exceptions was that such allowance would create excess supply in industrialized countries, allowing a limited expansion of exports to meet the legitimately expanding demand for "basic domestic needs" of developing countries The "industrial rationalization" clause would permit this extra allowance to be used on behalf of smaller producer countries which could no longer produce efficiently because of small scale resulting from the required output reductions Such countries would be allowed to transfer its production quota to another Party in accordance with Article 2 (5) Benedick, *supra*, note 38, p 81

[62] Approximately 75% of the world population currently lives in over 130 developing countries, *Survey The Third World*, **Economist**, Sept. 23, 1989, pp 3-4 Given the size and growth of population in these countries, the rate of ozone depletion in the next century depends equally, if not more, on the levels of CFC production and use in developing countries Industrialized countries, with only 25% of the world's population, produced and consumed almost 85% of CFCs. China and India, with 35% of the world's population, consume only 2% of all CFCs, J T B Tripp, *The UNEP Montreal Protocol . Industrialized and Developing Countries Sharing the Responsibility for Protecting the Stratospheric Ozone Layer*, 20 **NYUJILP** (1988) p 733, at pp 743-44

[63] It has been observed that this provision would only decrease overall CFC consumption by 35% which is 15% lower than the Protocol's target Moreover, if China, Brazil, India and Indonesia exercise this exemption, the annual rate of CFC production would more than double, Lori B Talbot, *Recent Developments in the Montreal Protocol on Substances that Deplete the*

environmentally safe alternative substances and technology for developing countries and the provision of subsidies, aid, credits, guarantees or insurance programmes for such purposes [64] Currently special status under Article 5 has been accorded to 91 developing countries including Thailand which will have until 2010 to complete their phase out of ODSs [65]

The reduction schedules of the Montreal Protocol were further strengthened by the London Amendment to the Protocol concluded at the Second Meeting of the Parties on June 29, 1990 [66] The Amendment added several ozone-depleting chemicals to the list of controlled substances, thus including another ten CFCs that were not covered by the original Protocol.[67] Two other ozone-depleting compounds are also now restricted by the Amendment. These are carbon tetrachloride and methyl chloroform [68] The Amendment accelerates CFC phase-out by requiring a 50% reduction in their use by 1995, an 85% reduction by 1997 and a total phase-out by 2000 [69] Halons were given the same schedule as CFCs, except for the 1997 phase-out requirement [70] Although they are scheduled to be totally phased out by 2000, an exemption is made to permit

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Ozone Layer the June 1990 Meeting and Beyond, 26 **International Lawyer** (1992) p 145, at p 151

[64] Article 5 (2) and (3).

[65] *Report on the Review of Article 5 of the Montreal Protocol*, submitted to the Open-Ended Working Group of the Parties to the Montreal Protocol at its 11th Meeting in Nairobi, 8-12 May, 1995, UNEP/OzL Pro/WG 1/11/4, 19 December 1994, Chapter 1

[66] The reduction schedules for the substances already controlled were adjusted and considerably tightened by a decision of the Meeting in London The adjusted schedules entered into force for all parties on 9 March, 1991 The Amendment, which also covered several new substances, entered into force on 10 August, 1992, consequent to the deposit of the twentieth instrument of ratification of the Amendment on 12 May, 1992 To date, 69 Parties have ratified the London Amendment (compared to 129 Parties which have ratified the Montreal Protocol) including India, which acceded to the Protocol as amended in June 1992

[67] The Montreal Protocol, Annex B lists the controlled substances to be added to the Protocol These are CFC 13, CFC 111, CFC 112, CFC 211, CFC 212, CFC 213, CFC 214, CFC 215, CFC 216 and CFC 217

[68] *Ibid*, Group II and Group III controlled substances Carbon tetrachloride is one of the cheapest and most toxic organic solvents It is up to 20% more ozone-depleting than the most potent CFC Methyl chloroform is less ozone-depleting than CFCs but is used almost as much as all CFCs combined Pinkham, *supra*, note , 257

[69] The Montreal Protocol as amended, Article 2A

[70] *Ibid*, Article 2B

maintenance of the level of production or consumption that is necessary to satisfy essential uses for which no adequate alternatives are available.[71] Beginning on 1 January, 1995, carbon tetrachloride must be reduced by 85% from its 1989 calculated level of consumption and be totally phased out by 2000.[72] Methyl chloroform must be reduced by 70% by 2000 and be totally phased out by 2005.[73] No timetable was set for phase-out of "transitional substances" that have a low ozone-depleting potential, such as hydrochlorofluorocarbons (HPFCs), but the Second Meeting of the Parties passed a Resolution which called for limited and responsible use of transitional substances, as well as regular review of such substances with a view to their replacement no later than 2040 by non-ozone depleting and more environmentally suitable alternatives and, if possible, no later than 2020.[74]

The London Amendment indicates the flexibility and dynamic nature of the Montreal Protocol, showing how remarkably it can evolve in response to changes in data and perceptions and develop more stringent standards as scientific evidence proves to be more conclusive. Article 6 of the Protocol provides that the Parties must periodically assess the control measures "on the basis of available scientific, environmental, technical and economic information". Adjustments to the list of the ozone-depleting substances and the required reductions of production or consumption can be decided upon at a Meeting of the Parties by consensus or, after all efforts at consensus have been exhausted, by a two-thirds majority vote of the Parties present and voting, which must represent a majority of the developing country Parties operating under Article 5 (1) present and voting and a majority of the Parties not operating under Article 5 present and voting.[75] In other words, a two-thirds majority has to be obtained from both groups of developed and developing countries. It is worth noting that the decisions taken in this

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[71] *Ibid*, Article 2B (3). Essential uses include use in fire-fighting systems, aircraft and manned computer rooms.
[72] *Ibid*, Article 2D.
[73] *Ibid*, Article 2E.
[74] *Ibid*, Annex VII.
[75] Article 2 (9) (c) as amended.

way will be binding on all Parties after six months because there is no provision for opting out, although a Party can still withdraw from the Protocol upon one year's notice, four years after assuming the obligations under the Protocol.[76] Unlike other treaties, therefore, this mechanism enables the Protocol to operate more effectively in developing more stringent measures for pollution control. This point is also evidenced by developments which have occurred at the following subsequent Meeting of the Parties.

At the Fourth Meeting of the Parties held in Copenhagen from 23 to 25 November, 1992, a reduction schedule was negotiated for the control of several new groups of substances. One of these groups is made up of HCFCs, the transitional substances for the replacement of CFCs No less than five stages of reduction are required but use of HCFCs will be restricted and controlled from 1996 onwards with a complete phase-out in 2030.[77] Due to disagreement over the data, the Copenhagen Meeting could only reach agreement on freezing consumption and production of methyl bromide from 1995.[78] The inclusion of another new substance, bromine containing halogenated hydrocarbons (HBFCs), for control and immediate phase-out was not disputed as these substances are not yet marketed.[79] At the Fifth Meeting of the Parties, held in Bangkok from 17-19 November, 1993, twenty-two States (excluding the U S) pledged to phase out HCFCs 15 years sooner than is required in the Convention A declaration, sponsored by Denmark, was also adopted by 16 countries, which called for a cut in methyl bromide consumption by at least 25% by the year 2000.[80] It is foreseeable that at future Meeting of the Parties, stricter control measures will be developed The

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[76] Articles 2 (9) (d) and 11

[77] *Ibid*

[78] *Ibid* The scientific assessment panel estimated that even an immediate reduction of methyl bromide by only 10% would be comparable to an acceleration of the phase-down of CFCS and methyl chloroform or of halons by three years About 85% of methyl bromide is used for soil fumigation (as a pesticide) mainly in warmer developed countries, including the Mediterranean members of the EC and the USA About 15% is used for commodity fumigation in developing countries, such as for food storage, pre-shipment and quarantine purposes, and another 5% for instructional fumigation appliances

[79] *Ibid*

[80] *Budgets Approved*, 24 **EPL** (1994) p 67

dynamics of the Montreal Protocol are therefore remarkable and further illustrate the flexibility of the Ozone Convention's approach, i e providing a "Framework" aimed at holding the line while more data are amassed and interpreted, followed by more stringent and specific Protocols and voluntary declarations

Related to the issues of accelerated adjustments and more stringent controls is the unresolved question of their implications for developing countries, i e would the accelerated phase-out dates resulting from adjustments bring forward the date of the 10-year delay for compliance of developing countries? Some developing countries have constantly expressed concern that developed countries' bringing forward of the phase-out date to 1995 should not mean that the 10-year grace period allowed to them would then end in 2005 instead of 2010 [81] In this respect, it is worth noting that according to a study authorised by the Executive Committee in 1994, the earliest feasible phase-out date for Article 5 developing countries is 2006 [82] These developments signal the fact that a smooth compliance with the Protocol amendments by developing countries may not be forthcoming Much remains contingent on the implementation of obligations on financial and technological transfer by developed countries as required by the Protocol, which as we will see, is not very promising

As part of its enforcement mechanism and its aim of promotion of global participation, the Protocol prohibits the importation within one year of the entry into force of the Protocol of controlled substances from States not parties to the treaty and bans export of the substances to non-parties from 1 January, 1993 [83] The Protocol also contemplates

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[81] See *Montreal Protocol Financing the Implementation*, 22 **EPL** (1992) p 315, at p 316 Also at the Copenhagen Meeting, developing countries, led by India and Malaysia, requested a general exemption from new obligations until the comprehensive review of their situation had taken place as envisaged in 1995, see T Gehring and S Oberthur, *The Copenhagen Meeting*, 23 **EPL** (1993) p 6, at p 10

[82] *Report on the Review of Article 5 of the Montreal Protocol, supra*, note 65, Chapter 7

[83] Article 4 (1) and (2) The prohibition on trade with non-parties has given rise to discussion (applicable also to other international environmental agreements containing trade provisions, such as CITES) of a possible contravention with GATT rules, see J Cameron and J Robinson, *The Use of Trade Provisions in International Environmental Agreements and Their*

an import ban on products "containing controlled substances" and products "produced with, but not containing controlled substances".[84] Furthermore, the Parties must discourage the export to non-parties of technology for producing and for utilizing controlled substances [85] These provisions raise the question of whether they contravene the provisions of GATT which require non-discrimination in international trade.[86]

Another unusual feature of the Montreal Protocol which has generated much discussion is its provision for procedures and institutional mechanisms for dealing with non-compliance, known as the non-compliance procedure (NCP).[87] The NCP was adopted on an interim basis at the Second Meeting of the Parties in London and formally adopted by the Fourth Meeting held in Copenhagen in 1992 [88] The document represented a compromise between the EC proposal and the more cautious positions of developing

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Compatibility with GATT, 2 **YIEL** (1991) p 3, J. Werksman, *Trade Sanctions under the Montreal Protocol*, 1 **RECIEL** (1992) p 69, S N Carlson, *The Montreal Protocol's Environmental Subsidies and GATT A Needed Reconciliation*, 29 **Texas JIL** (1994) p 211 On discussion of trade and environment, see in general, T Schoenbaum, *Agora Trade and Environment*, 86 **AJIL** (1992) p 700, E B Weiss, *Environment and Trade As Partners in Sustainable Development . A Commentary*, 86 **AJIL** (1992) p 728, B Kingsbury, *Environment and Trade ; The GATT/WTO Regime in the International Legal System*, in A E Boyle (ed), **Environmental Regulation and Economic Growth**, Clarendon Press, Oxford, 1994, pp 189-231, S Charnovitz, *Environmentalism Confronts GATT Rules Recent Developments and New Opportunities*, 27 **JWT** (1993) p 37

[84] Article 4 (3) and (4) However, at the Fifth Meeting of the Parties, it was decided not to impose "a ban or restriction on the import of products produced with but containing controlled substances at this stage", see W Lang, *Trade Restrictions As a Means of Enforcing Compliance with International Environmental Law : Montreal Protocol on Substances that Deplete the Ozone Layer*, paper presented at the symposium on "Enforcing Environmental Standards Economic Mechanisms As viable Means ?", Heidelberg, 5-7 July, 1995, at p 7

[85] Article 4 (5)

[86] However, it has been observed that the question of whether the trade provisions under the Montreal Protocol may conflict with GATT rules is to become "an academic rather than a political problem" as the membership of the Protocol is approaching "quasi-universality" and the fact that trade restrictions on products produced with controlled substances have been postponed (thus eliminating the possible complaint that there is a use of "process and product methods" as trade barriers, Lang, *op cit* note 84, p 10 A similar view is taken by E-U Petersmann, *International Trade Law and International Environmental Disputes in GATT*, 27 **JWT** (1993) p 43, at pp 72-5 Presumably, this argument can equally apply to CITES which now has 130 Parties

[87] Article 8 of the Montreal Protocol

[88] See *Montreal Protocol Decisions Taken*, at Annex IV, Non-Compliance Procedure, 23 **EPL** (1993) p 51 See also Szell, *supra*, note 26, pp 99-103

countries.[89] As a result, the Implementation Committee established under the procedure was expanded from 5 to 10 members to better reflect regional geographical representation and any State accused of non-compliance was to have a right to participate in the Implementation Committee but not in the elaboration of its recommendations on the complaint in issue.[90] The procedure can be initiated in three ways, either (i) by one or more Parties stating that it has "reservations" regarding another Party's implementation of the obligations under the Protocol, or (ii) by the Secretariat becoming aware of possible non-compliance by a Party, or (iii) by a Party which considers itself unable to comply fully with its obligations under the Protocol [91] The Party concerned must make a submission in writing to the Secretariat which will transmit such submission to the Implementation Committee. In cases where one Party has reservations about another Party's compliance, a copy of the submission will be sent to the accused Party whose reply, and information in support thereof, will also be transmitted to the Implementation Committee. The Committee, which meets twice a year, will consider the submissions with a view to securing "an amicable solution" of the matter. It will then report to the Meeting of the Parties, its report can include any recommendations it considers appropriate. The Parties will in turn "decide upon and call for steps to bring about full compliance with the Protocol".[92] The Fourth Meeting of the Parties also adopted an Indicative List of Measures that might be taken by a Meeting of the Parties in respect of non-compliance with the Protocol.[93] These measures are : (i) providing appropriate assistance, (ii) issuing cautions and (iii) suspension of specific rights and privileges under the Protocol.

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89 M Koskenniemi, *Breach of Treaty or Non-Compliance . Reflections on the Enforcement of the Montreal Protocol*, 3 **YIEL** (1992) p 123, at p 131.

90 *Montreal Protocol, supra*, note 88 The document states in its opening paragraph that the new procedure "shall apply without prejudice to the operation of the settlement of disputes procedure laid down in Article 11 of the Vienna Convention". Article 11 of the Vienna Convention provides for settlement of disputes by means of negotiation, good offices or mediation and conciliation. Parties may also opt for a compulsory means of dispute settlement by arbitration and submission of the dispute to the International Court of Justice

91 *Montreal Protocol, supra*, note 88, Annex IV, paras 1, 2 and 4

92 *Ibid* , paras 6-9

93 *supra*, note 91, Annex V, at p 52

Although the non-compliance procedure created under the Protocol is unprecedented in that it provides some potential for enforcement of the treaty obligations, it leaves some issues unresolved from a technical legal point of view. For instance, it is still not clear what kind of non-compliance would attract appropriate measures from the indicative lists, especially what kind of "breach" would lead to suspension of rights and privileges under the treaty.[94] It has also been argued that the procedure's immediate inclusion of third parties, its inflexibility and the formalized nature of the procedure may discourage developing countries from participating in the Protocol.[95] This is a weak criticism, however, especially as the Protocol is a multilateral treaty which aims to protect the collective interests of the parties so that a complaint made by one party concerning non-performance of another party cannot be characterized as a dispute just between the two parties involved. Indeed, bilateral reconciliation may be deemed undesirable in such a situation. Further, the Implementation Committee has been criticized for its lack of investigative and enforcement powers and in relation to the fact that its members are not objective experts but state representatives who may politicise the Committee's mission.[96] It has been submitted that the regime could be strengthened by more involvement of independent experts and NGOs, as in the case of the human rights regime and the ILO mechanisms.[97] Also it has been proposed that a verification

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[94] See the discussion in details in Koskenniemi, *supra*, note 89, pp 133-144 A draft indicative list of possible situations of non-compliance with the Protocol was not adopted at the Fourth Meeting The draft identified seven situations including a Party's failure to meet the control measures requirements, the provision on restriction of trade with non-parties, failure to meet the reporting requirements, non-payment of contributions and non-compliance with a decision of the Meeting of the Parties Among the legal and technical questions raised by Koskenniemi are problems concerning determining proportionality between countermeasures (suspension of rights and privileges) and breach (e g. non-performance of the emission reduction commitments, not submitting national reports within the time-limits), and the power of the Implementation Committee or the Meeting of the Parties, neither of which is a judicial body, to determine a prior wrongful act warranting countermeasures under the doctrine of state responsibility

[95] J Trask, *Montreal Protocol Noncompliance Procedure · the Best Approach to Resolving International Environmental Disputes ?*, 80 **Geo. LJ** (1992) p 1973, pp 1979-83

[96] E P Barratt-Brown, *Building a Monitoring and Compliance Regime Under the Montreal Protocol*, 16 **Yale JIL** (1991) p 519, at p 543

[97] *Ibid*, pp 550-556

committee, based upon the model of the IAEA's system of inspection, should be established under the Protocol to conduct inspections and provide on-site technical assistance during the transitional period when the move to substitute chemicals and processes is occurring [98] Although it would be ideal for any treaty to possess such an effective enforcement mechanisms, such proposal are rather unrealistic. It is hard enough just to attain worldwide participation as the Protocol has done; it cannot be expected at this stage, in the light of the economic and social (as well as political) implications, that State Parties, especially those which are developing States, will greatly strengthen these procedures.

Perhaps the most significant innovative features of the Montreal Protocol is its establishment of a financial mechanism to provide funds to assist developing countries in implementing their obligations under the Protocol In this respect, the Protocol represents the first multilateral environmental treaty to apply the principle of "common but differentiated responsibilities". Developing countries viewed the obligations imposed by the Protocol as an unfair burden for them, especially as the developed countries had contributed most to the present environmental problems due to their earlier industrialization and patterns of consumption [99] India and China declared that they would refuse to join the Protocol unless they were assured of receiving economic assistance.[100] Article 10 of the Protocol, as amended by the London Amendment, established a financial mechanism "for the purposes of providing financial and technical cooperation, including the transfer of technologies to Parties operating under Article 5

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[98] *Ibid*, pp 561-3 It should be noted, however, that under the present procedure, the Implementation Committee has as one of its functions "to undertake, upon the invitation of the Party concerned, information-gathering in the territory of that Party for fulfilling the functions of the Committee", paragraph 7 (d) of the Non-Compliance Procedure

[99] Benedick, *supra*, note 38, pp 148-9, The industrialized countries, with less than 25% of the world's population, were consuming an estimated 88% of CFCs, their per capita consumption being more than 20 times higher than that of the developing countries. With respect to China, the world's most populous country, its per capita CFC consumption was only about one-fortieth that of the EC and the U.S

[100] Pinkham, *supra*, note 38, p 277, China and India had development plans that called for substantially expanded use of CFCs For example, China had plans to produce 300 million refrigerators to satisfy domestic needs in the coming years

(1)" of the Protocol or the developing countries whose annual calculated level of consumption of the controlled substances is less than 0.3 kilograms per capita According to Article 10 (1), the mechanism "shall meet all agreed incremental costs of such Parties in order to enable their compliance with the control measures of the Protocol". The concept of "agreed incremental costs" is also to be found in subsequent environmental treaties, especially the Conventions on Climate Change and Biodiversity and, as will be discussed in more detail later in Chapters 3 and 9, there are several problems in determining the meaning and applying the term. Due to the U S 'concern over the precedent-setting implications of such a fund, a clause was incorporated stating that no precedent had been set.[101] The Fund started to operate from January, 1991 and its Secretariat is located in Montreal, Canada. An Executive Committee was established "to develop and monitor the implementation of specific operational policies, guidelines and administrative arrangements, including the disbursement of resources". It was to be assisted by the World Bank, UNEP, UNDP and other appropriate agencies.[102] The Fund would be financed by contributions from Parties not operating under Article 5 (1) [103] The Multilateral Fund was formally established at the Copenhagen Meeting and became operative from January 1993.[104] A difficult question is whether "adequate" implementation of obligations on provision of financial resources and technology transfer by developed countries is a precondition to developing countries' fulfilling their obligations Developing countries wanted to build into the Protocol an assurance that if

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[101] Article 10 (10) stated that the financial mechanism set out in the Article "is without prejudice to any future arrangements that may be developed with respect to other environmental issues". Pending the entry into force of the Amendment, the Second Meeting of the Parties established an interim Multilateral Fund of $160 million, which could be raised up to $240 million when more countries (an implied reference to India and China) joined the Protocol during the three-year period from 1 January, 1991 to 31 December, 1993 or until such time as the Financial Mechanism is established Upon ratification by China, the Third Meeting of the Parties raised the three-year Fund to US $200 million for 1992 See *The Copenhagen Meeting, supra*, note 81, p 10

[102] Article 10 (5)

[103] Article 10 (6) This must be made in convertible currency or, in certain circumstances, in kind or in national currency, on the basis of the UN scale of assessments

[104] Decision IV/18 of Fourth Meeting of the Parties, reprinted in 23 EPL (1993) p 51 The total contribution to the Fund for 1993 was set at US $113 34 million The amount of any resources remaining in the interim fund was to be transferred to it

they did not receive sufficient financial and technical help, they would not be obligated to implement the reduction schedules.[105] This proposal was not accepted by developed countries. Eventually a compromise was reached. According to Article 10A, the industrialized countries agreed to "take every practicable step...to ensure.... that the best available, environmentally safe substitutes and related technologies are expeditiously transferred to Parties operating under Article 5 (1)" and that "the transfers...occur under fair and most favourable conditions". In addition, it was provided that the capacity of the developing countries to fulfil the obligations "will depend upon the effective implementation of the financial cooperation as provided by Article 10 and transfer of technology as provided by Article 10A".[106] Any Article 5(1) Party may at any time notify the Secretariat in writing that "having taken all practicable steps, it is unable to implement any or all of its obligations ....due to the inadequate implementation of Articles 10 and 10A." The Secretariat will transmit such notification to the Parties which will consider the matter at their next meeting and decide upon "appropriate action to be taken".[107] These provisions represent the recognition of developing countries' dependence on financial and technical help from developed countries in performing their obligations but they did not go so far as to release them from their treaty obligations As originally provided for in the interim period, the Executive Committee consists of fourteen members, seven from the group of Parties operating under Article 5 (1) and seven from the Group of Parties not so operating. Decisions of the Committee are, failing consensus, taken by a two-thirds majority of the Parties present and voting which represents a majority of each group [108] The amount required for the Fund for the period from 1994 to 1996 was calculated to be $510 million [109] Thus each group has a blocking power reflecting a balance of each group's control over the allocation of the

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[105] Benedick, *supra*, note 38, pp 188-9, at p 196 Compare this to the same position taken by developing countries in negotiating the Climate change (Article 4 7) and the Biodiversity (Article 20 4) Conventions

[106] Article 5 (5)

[107] Article 5 (6)

[108] *supra*, note 104, Annex X, at p 53

[109] *Budgets Approved*, *supra*, note 80 However, total replenishment needed was $455 million as $55 million has been carried over from 1991-93 period

financial resources.

The Protocol provides a model for how to bring about cooperation between developed and developing countries in dealing with global environmental problems. For the first time, the developed countries accepted that they had a prime responsibility in solving the problems and that they had a duty to provide financial and technological assistance to developing countries to cooperate in this process This acceptance is based on, as stressed earlier, the principle of "common but differentiated responsibilities" which, apart from being explicitly proclaimed in the Rio Declaration, has become an important underlying principle for developing countries in accepting their conservation obligations under the Climate Change and the Biodiversity Conventions and probably in future negotiations of any international environmental agreements. The institutional structures of the Protocol also indicate that the two groups will have an equal role in decision-making, thus dismissing the possible charge of "environmental imperialism".

The success of the Protocol, however, must be assessed in the light of its actual achievements in reducing emissions of harmful gaseous substances At the Fifth Meeting of the Parties held in Bangkok from 17-19 November, 1993, the UNEP Executive Director, in a statement, noted that the average reduction of ozone-depleting substances by developed countries was 45%, but only nine developing countries had shown a decrease in their consumption, and three had shown an increase of more than 80% [110] Three main issues were also highlighted as inhibiting the full and effective implementation of the Protocol Firstly, a much smaller number of Parties had ratified the London Amendment and the Copenhagen Amendment than had ratified the original Protocol.[111] Secondly, the delay in reporting data by Parties continued to be a

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110 *Ibid.*

111 *Ibid* At the time of the Sixth Meeting of the Parties in October 1994, 139 Parties had ratified the Montreal Protocol, 93 Parties the London Amendment, and 34 Parties the Copenhagen Amendment which had entered into force in June 1994 Thailand has ratified the London Amendment

problem, for 1992, only 23 out of 99 Parties had reported data.[112] And thirdly, a high amount of unpaid contributions remained outstanding.[113] It is clear that the low contributions will affect the entire administration and capabilities of developing countries, including Thailand, to implement the Protocol

The Montreal Protocol has also been criticized by some scientists and environmentalists as not going far enough. According to some scientists, even if CFC production were to cease immediately, a 97% winter time reduction of the ozone layer over the Antarctic would continue for up to 100 years. Consequently, protecting the ozone layer requires a complete worldwide elimination of CFCs and halons.[114] An immediate worldwide ban is undoubtedly desirable, but again such expectations are obviously unrealistic, if not impossible, in a world of conflicting economic and political interests. Nevertheless, the criticism is useful in setting a goal towards which future developments of the Protocol must strive.

Finally, there has been criticism of the Protocol's lack of effective provision for such enforcement powers as trade sanctions, to penalise parties which fail to meet their pollution control commitments.[115] From the point of view of developing States, the use of trade sanctions is highly debatable and undesirable. It is prone to be abused by developed States and is difficult to control at the international level. Above all, it can easily give rise to resentment among developing countries which may view the measures as an unfair imposition upon them of developed countries' standards. Moreover, trade

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112 *Ibid*

113 *Ibid*. Out of the 127 million dollars due for 1991 and 1992, 21 million dollars are still outstanding, while for 1993, only about 53 million dollars of the pledged 114 million have been received. At the Sixth Meeting of the Parties held in Nairobi, 6-7 October, 1994, the Executive Director of UNEP pointed to the alarming trend in contributions still outstanding to the Multilateral Fund and the Trust Funds, see 25 **EPL** (1995) p 21.

114 L. B. Talbot, *supra*, note 63, pp 147 and 175.

115 J. A. Mintz, *Progress Toward a Healthy Sky: An Assessment of the London Amendments to the Montreal Protocol on Substances that Deplete the Ozone Layer*, 16 **Yale JIL** (1991) p 571, at p 582.

sanctions have rarely been successful in inducing compliance [116] Indeed, they have tended to undermine the international cooperation necessary for dealing with global environmental problems.

In conclusion, it is fair to say that, despite the above criticisms the Montreal Protocol represents a remarkable achievement in international cooperation for environmental protection. The instrument recognizes the right of developing countries to development and the responsibility of developed countries to rectify environmental problems caused largely by their past activities. It also provides a moderate mechanism to enforce compliance through institution of a non-compliance procedure. It remains to be seen, however, whether the nations of the world will live up to their commitments This will depend largely on the political will of states, which in turn depends on their economic situation.

5. The 1992 United Nations Framework Convention on Climate Change (FCCC)[117]

The FCCC is a result of increasing environmental concern about potential global warming. Taking into account the precautionary principle, most scientists consider that there is sufficient scientific evidence to believe that global warming is caused by emissions of carbon dioxide and other so-called greenhouse gases (GHGs) such as methane, nitrous oxide and CFCs.[118] These gases, which are the products of

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116 See reactions of the ASEAN countries led by Malaysia with respect to import restrictions imposed by Austria on tropical timber which was deemed to be "unsustainably harvested", *infra*, Chapter 7, note 48. With the threat of Malaysia's filing a complaint to GATT, Austria was forced to withdraw the measure The dispute also demonstrated the ineffectiveness of such measure to other developed countries, such as the Netherlands, which were contemplating the same kind of legislation.

117 31 ILM (1992) 849

118 The "greenhouse effect" is a naturally-occurring phenomenon Certain greenhouse gases, the most important of which is water vapor, absorb heat in the atmosphere and re-radiate it towards the Earth. This raises the Earth's temperature and makes it inhabitable The increased emissions of greenhouse gases resulting from expansion in human activities upset the balance between emissions of greenhouse gases from natural sources and removal of these gases by "sinks", thus leading to an unnatural rise of the Earth's temperature See in general, J Leggett

industrialisation and population growth, trap heat from solar radiation which ordinarily would have slipped through the earth's atmosphere into space. According to the IPCC Scientific Assessment, if the current patterns of emissions continue unchecked, the concentration of GHGs could cause an average global warming in the range of 0.2 ^{o} to 0.5 ^{o} C per decade during the next century which will result in a likely increase in global mean temperature of about 1 ^{o} C above the present value by 2025 and 3 ^{o} C above today's value before the end of the next century.[119] The impacts of climate change are still uncertain in terms of magnitude, timing and geographical distribution. According to climate models and impact analyses, these include sea level rise of about 20 cm in global mean sea level by the year 2030, and 65 cm by the end of the next century, with significant regional variations [120], greater number and increased intensity of hurricane, droughts, forest fires and flooding.[121] Given the existing scientific uncertainties that prevailed at the time that the Convention was negotiated, the FCCC can be said to indicate an application of the precautionary principle, outlined in Chapter 1.

(ed), **Global Warming : the Greenpeace Report**, Oxford University Press, Oxford, 1990, T Barker, P Ekins, and N Johnstone (eds), **Global Warming and Energy Demand**, Routledge, London, 1995, and S. Frankhauser, **Valuing Climate Change : the Economics of the Greenhouse**, Earthscan, London, 1995

[119] J T Houghton, G J Jenkins and J J Ephraums (eds), **Climate Change : the IPCC Scientific Assessment**, WMO-UNEP, Cambridge University Press, 1990, at xxii The Intergovernmental Panel on Climate Change or IPCC was established by the World Meteorological Organization (WMO) and UNEP in 1988 to "provide internationally coordinated assessments of the magnitude, timing and potential environmental and socio-economic impact of climate change and realistic response strategies". See also J T Houghton, B A Callander and S K Varney (eds), **Climate Change 1992 : the Supplementary Report to the IPCC Scientific Assessment**, Cambridge University Press, Cambridge, 1992 It was concluded that global mean surface air temperature has increased by 0 3 ^{o} to 0 6 ^{o} C over the last 100 years However, the Supplementary Report contains new findings which include the fact that the cooling effect of aerosols (airborne particle or particles resulting from sulphur emissions may have offset a significant part of greenhouse warming in the Northern Hemisphere (NH) during the last decades, whilst the rates of increase in the atmospheric concentrations of many greenhouse gases have continued to grow or remain steady, those of methane and some halogen compounds have slowed, and that some data indicate that global emissions of methane from rice paddies may amount to less than previously estimated, Houghton, Callander and Varney, p 5

[120] J T Houghton, *Scientific Assessment of Climate Change . Summary of the Report of IPCC Working Group I*, in J Jager and H L. Ferguson, **Climate Change : Science, Impacts and Policy**, Proceedings of the Second World Climate Conference, WMO, Cambridge University Press, Cambridge, 1991, pp 23-45, at p 41

[121] World Resources Institute, **World Resources 1992-93**, 1992, at p 196

The climate change issue was raised in the U N General Assembly for the first time in September, 1988 and in UNGA Res. 43/53, it was declared to be a "common concern of mankind".[122] Thereafter climate change was discussed at various international workshops and conferences An important meeting was the 1989 Noordwijk Ministerial Conference on Atmospheric Pollution and Climate Change.[123] Another Conference which reflected the heightened political interest in the issue was the Second World Climate Conference (SWCC) held in Geneva in November, 1990 [124] Although the resulting Declarations admitted the need to stabilise and reduce emissions of GHGs, none set the time by and the level at which this should be achieved.

The text of the FCCC was adopted by the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change (INC)[125] on 9 May, 1992 and it was

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[122] See Chapter 1. UNGA Res 43/53 is reprinted in Churchill and Freestone, **International Law and Global Climate Change**, pp 240-242

[123] The Conference was held from 5 to 7 November, 1989 It was organized by the Netherlands and attended by representatives of 66 states The result of the Conference was the Noordwijk Declaration on Atmospheric Pollution and Climate Change; 19 **EPL** (1989) p 229 It recognizes that climate change is a common concern of mankind and that all countries should initiate actions and develop strategies to control, limit or reduce emissions of greenhouse gases, but industrialized countries have differentiated responsibilities from developing countries They should reduce emissions taking into account the need of developing countries to achieve sustainable development "Joint effort and action should aim at limiting or reducing emissions and increasing sinks for greenhouse gases to a level consistent with the natural capacity of the planet Such a level should be reached within a time frame sufficient to allow ecosystems to adapt naturally to climate change "

[124] 20 **EPL** (1990) p 220 Like the Noordwijk Declaration, the Ministerial Declaration of the SWCC recognizes the principle of equity and the common but differentiated responsibility of countries as the basis of any global response to climate change, and that "the ultimate global objective should be to stabilize greenhouse gas concentrations at a level that would prevent dangerous anthropogenic interference with climate".

[125] INC was established by the UNGA Res 45/212 on *Protection of Global Climate for Present and Future Generations of Mankind*, U N. Doc. A/45/49 (1990), reprinted in Churchill and Freestone (eds), **International Law and Global Climate Change**, pp 249-252 Its mandate was to negotiate a convention containing "appropriate commitments" in time for signature at UNCED in June, 1992 The INC met six times between February 1991 and May 1992 On the problems and constraints of the negotiating process, see J-F. Pulvenis, *The Framework Convention on Climate Change*, in Campiglio et al , **The Environment After Rio**, pp 71-110 The time constraint and the complexity of the issues involved led to, in effect, the situation that the Convention was negotiated behind closed doors during the last few days of the negotiation with the participation of only a few delegates

subsequently opened for signature at UNCED in Rio de Janeiro in June 1992. It was signed by 154 States and the European Community. On the 21 December, 1993, the stipulated requirement for 50 ratifications for entry into force was met and the Convention entered into force, in accordance with Article 23, on 21 March, 1994. In view of the rapid increase in scientific, as well as public awareness during the second half of the last decade leading up to the negotiations of the Convention, which took only fifteen months, it is creditable that the Convention was adopted at all This fact is relevant when we come to assess the achievements of the Convention.

When compared to other framework conventions such as the UNEP Regional Seas Conventions, the Convention on Long Range Transboundary Air Pollution and the Vienna Convention for the Protection of the Ozone Layer, the FCCC contains more substantive and detailed provisions. Thus, one writer has observed that the word "Framework" in the title is a misnomer.[126] However, the Convention is generally seen as falling short of innovative agreements such as the Montreal Protocol on Substances that Deplete the Ozone Layer [127] On the whole, it contains deliberately ambiguous provisions which represent a carefully balanced compromise of complex economic and political interests beyond the simple North-South dimensions The preamble acknowledges that climate change and its adverse effects are "a common concern of mankind".[128] It also recognizes the principle of "common but differentiated responsibilities", Principle 2 of the Rio Declaration (which is a modified form of Principle 21 of the UNCHE Declaration), the fact that the share of global emissions originating in developing countries can grow to meet their social and development needs, and the principle of intergenerational equity.[129] The substantive provisions set

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126 P. Sands, *The United Nations Framework Convention on Climate Change*, 1 **RECIEL** (1992) p 270, at p 271

127 D Bodansky, *Managing Climate Change*, 3 **YIEL** (1992) p 60, at p 64 For instance, it does not provide for trade sanctions against non-parties Nor does it make provision for amendments or adjustments that can bind dissenting parties

128 Preamble, para 1

129 *Ibid*, paras 6, 8, 3 and 23 respectively

out the objective, principles and commitments for the stabilization of GHGs but fail to establish targets or timetables for actions. In addition, the Convention provides for a financial mechanism, institutional arrangements, "communication of information" or reporting requirements and dispute settlement procedures.

It is worth noting that the objectives and principles are set out in the substantive part of the Convention instead of in the Preamble as is normal done in environmental agreements. This may be accounted for by the attempts of some developing countries to elevate the status of these issues, but nonetheless this approach raises questions concerning the exact status of these two Articles and whether or not they create legal obligations.[130] Article 2 provides that the "ultimate objective" of the Convention is to achieve "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system". Picking up the words of the Noordwijk Declaration, it adds, "such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner". It is not clear whether the objective in this Article falls under the category of "object and purpose" within the scope of Articles 18 and 31 (1) of the Vienna Convention on the Law of Treaties, which would impose a duty upon signatories not to defeat the stabilization objective. The insertion of the word "ultimate" may have been an attempt to prevent this objective from being equated with the "object and purpose" of the Convention.[131]

Article 3, entitled "Principles", sets out the guiding principles to be followed by Parties in implementing the Convention's provisions. These include the principles that : developed countries should take the lead in combating climate change and its adverse

130 D Bodansky, *The United Nations Framework Convention on Climate Change : A Commentary*, 18 Yale JIL (1993) p 451 (hereinafter Bodansky, UNCCC), at pp 500-502.
131 *Ibid*, at p 500

effects, precautionary measures should be taken, policies and measures to deal with climate change should be cost-effective and comprehensive; Parties have a right to promote sustainable development and policies and measures should be appropriate for the specific conditions of each Party; Parties should cooperate to promote a supportive and open international economic system and measures to combat climate change should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade.[132] On the whole, Western countries were able to define the principles in Article 3 more narrowly than in the parallel negotiations on the Rio Declaration.[133] For instance, the right "to promote sustainable development" is arguably different from the traditional "right to development" of the 1986 UN Declaration, as outlined in Chapter 1.[134]

The commitments under the Convention can be divided into general commitments applicable to all Parties, specific commitments applicable to Parties included in Annex I, which comprises the developed or OECD countries and countries that are undergoing the process of transition to a market economy (the former Eastern Bloc), and specific commitments to provide financial resources and technology transfer which are applicable to Parties listed in Annex II (the OECD countries only). According to Article 4 (1), the general commitments to be implemented by all Parties include obligations to develop national inventories of anthropogenic emissions by sources, and of removal by sinks of all GHGs not controlled by the Montreal Protocol, using comparable methodologies, to formulate national and regional programmes containing measures to mitigate climate change, to promote and cooperate in the development of technologies, conservation and enhancement of sinks and reservoirs of GHGs; to integrate climate

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132 Article 3 (1)-(5) The USA tried to forestall arguments that the principles in Article 3 are part of customary international law which bind states generally. This was done by inserting in the opening paragraph the phrase *inter alia* and that the principles are merely to act as a "guide" Also the word "States" is replaced by "Parties"; see Bodansky, *UNCCC*, *supra*, note 130, at p 502

133 Bodansky, *UNCCC*, *ibid*

134 *Ibid*, p 504 See also Chapter 1, pp

change considerations into their relevant social, economic and environmental policies "to the extent feasible"; to promote and cooperate in research, exchange of information and education; and to communicate or report to the COP information related to implementation.[135] To a certain extent, these provisions were weakened by modifications introduced to protect different states' economic and political positions. For example, due to opposition from oil-producing countries, many of which are developing, no reference is made in Article 4 (1) (c) to development of energy efficiency measures or renewable energy sources Similarly, paragraph (d) on conservation and enhancement of sinks does not single out forests because of opposition from Malaysia.[136]

The specific commitments in Article 4 (2) are more important and have been more widely discussed. These involve the issues of setting targets and timetables, the most controversial in the entire negotiation. The EC position, which was supported by most OECD countries, though not the U.S.A , favoured an immediate commitment by developed countries to stabilise carbon dioxide emissions at the 1990 level by the year 2000 [137] The two highly ambiguous subparagraphs (a) and (b) result from U.S opposition. Not only do the provisions not set any firm targets and timetables, they are also heavily qualified One commentator has even rated them as "the most impenetrable treaty language ever drafted".[138] Article 4 (2) (a) provides that developed country Parties will commit themselves to "adopt national policies and take corresponding measures on the mitigation of climate change by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs." Instead of setting timetables, the Parties simply recognize that "the return *by the end of*

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[135] Article 4 (1) (a)-(j)

[136] Bodansky, *UNCCC, supra*, note 130, at p 509

[137] *Ibid* , at p 514 The IPCC Scientific Assessment had concluded that reductions of 60-80% in carbon dioxide and 15-20% in methane emissions would be necessary to stabilize atmospheric concentrations at present levels, *Houghton et al , supra*, note 119, at xi At present the US is responsible for about one-quarter of global total emissions of CO_2 Reductions in emissions will thus mean more substantial abatement costs for the US than for other countries

[138] Sands, *supra*, note 126, p 273

the present decade to *earlier levels* of anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol would contribute to such modification" (emphasis added) To further exacerbate the inelegance of this language, several other factors are to be taken into account, such as the differences in the Parties' starting points and approaches, the need to maintain strong and sustainable economic growth, the available technologies and other individual circumstances.

Article 4 (2) (b) is equally ambiguous in dealing with targets. Developed country Parties must communicate within six months of the entry into force of the Convention detailed information on their policies and measures "*with the aim of returning individually or jointly to their 1990 levels* these anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol" (emphasis added). The highly ambiguous and qualified language used by the Convention makes it extremely questionable whether the Convention creates any binding targets and timetables at all. It has been observed that "the most that can be said of these provisions is that they establish soft targets and timetables with a large number of loopholes".[139]

Another contentious issue in the negotiation is the provisions for financial resources and technology transfer. The developed countries agreed to provide "*new and additional* financial resources" (emphasis added) to developing country Parties to meet the agreed full costs incurred in complying with their reporting requirements (information concerning national inventories of anthropogenic emissions by sources and removal by sinks, and the steps taken to implement the Convention) They must also provide financial resources to meet *the agreed full incremental costs* arising from the implementation of their general commitments.[140] In implementing their financial commitments, developed countries will take into account "the need for adequacy and predictability in the flow of funds" and "the importance of appropriate burden sharing

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[139] *Ibid*, p 274
[140] Article 4 (3)

among the developed country Parties".[141] The language resembles that found in other modern environmental treaties providing for financial resources, such as the Biodiversity Convention. It does not go further to state the specific level of funding required, nor does it make clear whether the commitments to provide financial resources and technology are mandatory. In what may have become, since the Montreal Protocol, a standard provision on this question, the Convention specifies simply that "the extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties" [142] Again, the statement amounts to something like a factual observation rather than imposing binding obligations on developed countries to provide financial resources or making the implementation of developing countries' commitments contingent upon it It is worth noting that the *agreed full incremental costs* of implementing measures must be agreed between the developing country concerned and the institution established by the financial mechanism under Article 11.[143] In practice, this would mean that a developing country would have to propose a project to that entity and would receive funding only if the project is approved This makes discussion of the financial mechanism important.

As in the case of the Biodiversity Convention, the developed countries wanted to entrust the provision of financial resources to the Global Environment Facility (GEF) instead of a newly designated institution, whereas developing countries opposed this on the ground

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141 *Ibid*

142 Article 4 (7)

143 At COP I held in Berlin from 28 March to 7 April 1995, no agreement was reached on the definition of "agreed full incremental cost". It was decided that the term should be applied in a flexible and pragmatic manner on a case-by-case basis, whereby guidelines can be subsequently developed, see S. Oberthur and H Ott, *UN/Convention on Climate Change, The First Conference of the Parties*, 25 **EPL** (1995) p 144, at pp 147-8.

that the GEF was dominated by the North and its administration was neither transparent nor democratic. They sought establishment of a completely new financial institution operating under the authority of the Conference of the Parties (COP) in the administration of which they would thus participate. As also in the Biodiversity Convention, a compromise was reached Article 11 establishes a mechanism for the provision of financial resources and the transfer of technology. The mechanism will function "*under the guidance of and be accountable to* the Conference of the Parties" (emphasis added), which will "decide on its policies, programme priorities and eligibility criteria" related to the Convention.[144] It is also stated that the financial mechanism will have "an equitable and balanced representation of all Parties within a transparent system of governance" [145] Article 21 (3) entrusts the operation of the mechanism to the GEF on an *interim basis* It further stipulates that GEF "should be appropriately restructured and its membership made universal". The relationship between the COP and GEF or future permanent mechanism, if the COP decides to designate a different body, is left unclear It is arguable that the term "guidance" denotes a weaker power for the COP than the term "authority". Presumably, the accountability to the COP implies that the COP can question the functioning of the GEF or other designated mechanism These points will have to be clarified by the COP in the future The restructuring of the GEF was completed in March 1994, whereupon it was transformed from an experimental programme into a permanent financial mechanism.[146] However, it remains uncertain whether or not it will be designated as the body responsible for operating the financial mechanism under the FCCC on a permanent basis The issue remained unresolved at the COP I where it was decided that

[144] Article 11 (1) This has given rise to a controversial question concerning the relationship between the COP and the institution operating the financial mechanism One writer has observed that the relationship is one "between virtual equals", and the COP will not be able to enjoy the position of "supreme body" within the institution that it has in relation to other subsidiary bodies established under the Convention, see Pulvenis, *The Framework Convention on Climate Change, supra,* note 125, pp 107-8 As will be seen in Chapter 3, this also poses a problem with respect to the Biodiversity Convention both prior to and at COP I and COP II where it was decided that GEF was to continue to operate on an *interim basis*

[145] Article 11 (3)

[146] See *GEF Restructuring Instrument,* 24 EPL (1994) p 156

the newly restructured GEF will continue to operate only on an *interim basis* with a provision to review the arrangement within four years [147]

The Convention contains some other innovative features which are worth mentioning First, it establishes, for the first time, the concept of joint implementation (JI) The rationale for JI is that it is cost-effective. It would allow a country to take abatement measures in another country where the costs of such measures are lower [148] Consequently, the country undertaking such a project in another country would be granted credits for achieving its own emissions target by limiting emissions or enhancing sinks in other countries This would reduce the costs of implementing the Convention and help to advance its ultimate goals [149] Article 3 (3) of the Convention provides that "(e)fforts to address climate change may be carried out cooperatively by interested Parties". More specifically, Article 4 (2)(a) stipulates that Parties may implement policies and measures (on the mitigation of climate change) jointly with other Parties The obvious targets for JI projects are developing countries and countries of the former Eastern bloc where there is still much room to improve efficiency of energy use. Apart from contributing to improvement in cost-effectiveness, proponents of the JI concept argue that JI could be an instrument that would further the transfer of financial resources and technology from developed to developing countries in pursuance of joint projects undertaken in developing countries.[150] On the other hand, critics object to the concept on a number of grounds. These include the possibility that it can be abused through fraudulent collusive agreements between developed and developing

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[147] Oberthur and Ott, *supra*, note 143, p.147

[148] Joint implementation can be seen as one way of using market mechanisms and economic incentives to achieve environmental goals. It derived from the idea of "tradeable permits" as used in the U.S to encourage compliance with the U S Clean Air Act, 42 U.S.C. (1990) For a theoretical discussion of using tradeable atmospheric trace gas (ATG) permits, see A Markandya, *Global Warming · The Economics of Tradeable Permits*, in D. Pearce (ed), **Blueprint 2, Greening the World Economy**, Earthscan Publications, London, 1991, pp 53-62

[149] Bodansky, *UNCCC*, *supra*, note 130, p 520

[150] S Oberthur, *Discussion on Joint Implementation and the Financial Mechanism*, 23 **EPL** (1993) p 245, at p 246 Also Bodansky, *UNCCC*, *supra*, note 130, p 521 Support for the joint implementation approach has come largely from the OECD and EU countries

countries engaged in such joint projects and that the concept is unethical because it would allow a developed country to make its reductions abroad instead of taking responsibility at home.[151]

In practice, several dangers and problems can arise in implementing the concept [152] At INC 8, the concept was discussed at length. Some of the problems envisaged were for example, the need to take into account the transaction costs of finding suitable partners and projects as well as of negotiating appropriate agreements; the possibility that JI could reinforce unsustainable economic structures in industrial countries and hinder the development of new and more energy-efficient technology; the question of finding reliable methodologies for determining a baseline for emissions which could be used for calculating the amount of emissions actually avoided by JI, a danger of double-counting of avoided emissions by the investing and the host country; and questions of for how long emission credits should be valid and how credits for enhancing sinks abroad should be given.[153] Apart from these practical problems of implementing the concept, the monitoring and reviewing of data submitted by national governments to ascertain whether or not the concept is properly applied could be very difficult, given the limitations of the present system Thus, the concept may not be as appealing as it at first appeared to be If it can be implemented at all, it is likely to be supplementary only to domestic measures Some suggestions have been made for mitigating its disadvantages For instance, a ceiling could be put on the reduction of emissions that a donor country is allowed to realize through joint implementation and emission reductions achieved in

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151 Bodansky, *UNCCC*, *supra*, note 130

152 See F Yamin, *The Use of Joint Implementation to Increase Compliance with the Climate Change Convention : International Legal and Institutional Questions*, 2 **RECIEL** (1993) p 348 Yamin raises a number of legal, institutional, as well as practical problems as regards JI The Convention does not specify the precise circumstances in which the concept becomes operable, how it should take place, and the legal and institutional modalities required to establish and operate it According to her, JI also poses a number of practical questions concerning a State's right to, for example, revoke the transfer of emission permit or credit to another entity, or what guarantee, if any, a State or other entity which has bought such permits or provided the investment to produce the "credits" has that it will not in future be subject to nationalisation, expropriation, or confiscation

153 Oberthur, *supra*, note 150, p 246

this way could be discounted [154] Nevertheless, many uncertainties remain with respect to the concept However, at COP I, the Parties agreed on a pilot phase for "activities implemented jointly" under which both developed and developing countries can participate "on a voluntary basis", but "no credits shall accrue to any Party as a result of GHG emissions reduced or sequestered during the pilot phase".[155]

A second innovative feature is that the convention recognises, albeit nominally, the interests of small island states which are especially vulnerable to rising sea levels caused by global warming [156] Article 4(4) provides that developed countries will "assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects". However, Article 4 (4) does not specify any particular degree of funding [157] It is clear that there is a general reluctance among the OECD countries to fund adaptation costs as these can be enormously and unpredictably high. The issue was intensely debated at COP I As a result, the Conference adopted a three-stage approach to the question and, for the time being, funding is confined to stage one consisting of planning to identify particularly

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[154] *Ibid*, p 247 Some figures for the setting of ceiling were cited, such as 25% of the donor country's overall reductions and/or 5% of its total emissions Discounting emissions reductions would have the advantage of limiting joint implementation projects to those cases where abatement costs would be substantially lower.

[155] Oberthur and Ott, *supra*, note 143, p 147. The agreement to allow developing countries to participate is a concession by G 77 countries in exchange for the provision that no crediting will be granted during the pilot phase

[156] The small island states in the Pacific and the Caribbean formed a group called Association of Small Island States (AOSIS). During the INC negotiations, they were closely aligned with the North in proposing stabilisation targets As they are subject to more immediate risks of adverse effects from global warming, they sought insurance against the damage and a recognition of responsibility for providing them with financial resources to cover adaptation costs, such as building sea walls and developing heat and drought resistant crops For the impacts and the resulting implications in international law, see D Freestone, *International Law and Sea Level Rise*, in Churchill and Freestone, *supra*, note 12, pp 109-125, where such issues as change in maritime zones and jurisdiction, the duty to cooperate with neighbouring states in taking abatement measures etc are discussed See also D Zaelke and J Cameron, *Global Warming and Climate Change - An Overview of the International Legal Process*, 5 **AUJILP** (1990) p 249, which focuses on low-lying island and coastal States and how these States can use the international legal process to protect their interest

[157] Bodansky, *UNCCC*, *supra*, note 130, p 528

vulnerable areas and appropriate policy options [158]

The third innovative feature is that the Convention brings out more clearly the differential treatment between developed and developing countries. Although the principle of "common but differentiated responsibility" is a frequently cited principle of international environmental law and is not a new development that developed countries have recognised as a major responsibility by accepting moderate financial commitments in various treaties to help developing countries tackle environmental problems, the FCCC draws a sharper distinctions between the different classes of countries First of all, the countries are treated differently in relation to the binding commitments undertaken under Article 4, developed countries and countries with economies in transition are required to take more specific measures than developing countries. The developed country Parties are further required to make commitments on financial resources and technology transfer Finally, the Convention differentiates between the required content of developed and developing countries' reports under Article 12 A developed country must make an initial report within six months of the entry into force of the Convention. The report must incorporate a detailed description of the policies and measures that it has adopted to implement its commitments and must provide a specific estimate of the effects of such policies and measures [159] The required content of the report for developing countries is less strict and they are allowed three years to submit their initial report.[160] Furthermore, the least developed countries may make their initial report at their discretion [161] Technical and financial support in compiling information and reports is to be provided to developing countries by the developed ones on request.[162] On the whole, the Convention goes further than other Conventions in providing for differential treatment of developed and developing countries.

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158 Oberthür and Ott, *supra*, note 143 Stage two will consist of taking of measures to prepare for adaptation, and stage three measures to facilitate adaptation
159 Articles 12 (2), (5) and 4 (2)(b)
160 Article 12 (1) and (5)
161 *Ibid*
162 Article 12 (7)

Apart from establishing the COP and the Secretariat, the Convention establishes two other subsidiary bodies to the COP. These are the Subsidiary Body for Scientific and Technological Advice (SBSTA), which is a multidisciplinary body comprising government representatives competent in the relevant field of expertise, to provide information and advice on scientific and technological matters to the COP,[163] and the Subsidiary Body for Implementation (SBI), comprising government representatives who are experts on matters related to climate change, which is to consider reports and assess the overall aggregated effect of the steps taken by the Parties [164] The Convention also provides procedures for settlement of disputes [165] Further, a non-adjudicative mechanism, modelled on the non-compliance procedure of the Montreal Protocol, is to be established This is termed a multilateral consultative process (MCP). It is intended to provide a non-adversarial procedure for the resolution of questions regarding the implementation of the Convention by helping Parties to comply before the matter develops into a dispute properly so-called. However, the establishment of such a mechanism is left to the COP and so far little progress has been made in this regard.

It is probably too early to make a well-balanced assessment of the FCCC. Many issues will have to be dealt with by the COP. The Convention has been heavily criticised as being weak when compared to the Montreal Protocol, especially as it fails to set any concrete stabilisation of emissions targets and timetables However, the major contribution of the Convention to alleviating the world's environmental problems lies in the fact that the Convention provides a framework within which the climate change can be addressed and institutions or forum where discussion and bargaining can lead to more

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163 Article 9.
164 Article 10
165 Article 14 provides for settlement by negotiation or any other peaceful means, and conciliation by a conciliation commission which can render a "recommendatory award" Parties can also choose to resolve a dispute by submission of the dispute to the International Court of Justice or arbitration, or both

substantive commitments in the future.[166] Besides, the issue of climate change is more complex and can have greater impacts on the economy than the issue of the diminishment of the ozone layer It cuts across all sectors, including transport, energy, agriculture, industry and forestry. Given the much greater number of countries involved in the negotiation and the effects the Convention has on diverse interests, the climate change issue was a much more difficult one to negotiate.[167] The fact that the Convention was adopted at all is creditable.[168] It remains to be seen whether the Convention will serve as an effective basis for future work. An obvious development that can be envisaged is adoption of protocols dealing with various specific aspects of climate change, such as a protocol on deforestation or one on sea level rise, as well as a protocol to set out specific targets and timetable for the reduction of GHGs. It is worth noting that at COP I in April 1995, the Parties recognised that the commitments of developed countries as stipulated in Article 4 (2) (a) and (b) are inadequate and agreed on a so-called "Berlin Mandate" according to which a negotiating group was set up to develop a legal instrument (likely to be a Protocol) to set targets and timetables for such reduction for the period after 2000 within the next two years, i e. before the end of 1997. The first true test to the achievement of the Convention will therefore depend on whether or not this primary task can be successfully executed It is worth noting that the records of implementing the Convention among the industrialised countries have so far been unimpressive. Given that developed countries have difficulties in achieving even

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166 See D M Bodansky, *The Emerging Climate Change Regime*, 20 **Annu. Rev. Energy Environ.** (1995) p 425, at p 432 It has also been observed that it may be unfair to compare the Climate Change Convention to the Montreal Protocol which was a culmination of a decade of international work; Bodansky, *Managing Climate Change*, supra, note 127, pp 64-68 According to him, the Convention's recognition of the need to stabilise atmospheric concentrations of greenhouse gases helps to legitimise climate change as an international issue It also institutionalises a process to allow for elaboration of international norms and rules in the future

167 Between 102 and 151 states participated in the various sessions of the INC. In contrast, 43 states participated in the negotiations for the Vienna Convention and about 60 in the negotiations of the Montreal Protocol Benedick, *supra*, note 38, pp 44 and 74 Moreover, developing countries did not become actively involved in the negotiations of the Montreal Protocol until the London Amendment

168 As observed by Bodansky, "building a climate change regime is the art of the possible", Bodansky, *The Emerging Climate Change Regime*, *supra*, note 166, p 432

the target of returning to the 1990 emission levels by the year 2000, it is unlikely that they will be able to undertake more stringent commitments in the near future.[169] Perhaps one of decisive factors which would stimulate more action is more scientific evidence or certainties to demonstrate the gravity and urgency of the climate change problem. This, plus the pressure from public opinion, as we have seen in the case of the Montreal Protocol, can urge governments to make more stringent reduction commitments. Equally worrying is the difficulty in persuading developing countries to undertake specific commitments with regard to reduction of GHG emission As described above, the FCCC prescribes few obligations to these countries and the Berlin Mandate further specifies that any new commitments which may be introduced from the negotiating process will apply only to industrialised countries Yet it has been projected that developing countries will contribute significantly to the world's GHG emission by the mid of the next century Thus unless developing countries, such as Brazil, China, and India, which will become major polluters, also undertake some reduction commitments, any achievement by the Convention could be seriously undermined. To a large extent, this will depend on the level of financial resources and technology transfer provided to these countries, which, unfortunately, has so far been modest.

169*Ibid.*, p 438 Only five OECD countries have introduced carbon taxes (Denmark, Finland, the Netherlands, Norway and Sweden) and little effort has been made to reduce emission from the transportation sector which contributes most to the emission increases

CHAPTER 3

THE CONSERVATION OF BIOLOGICAL DIVERSITY

The purpose of this Chapter is to provide an overview of the current international legal developments concerning the conservation of biological diversity The loss of biodiversity is one of the major factors threatening sustainable development because biodiversity is necessary for the functioning of the biosphere as a whole. The Global Biodiversity Strategy defines "biological diversity" as "the totality of genes, species, and ecosystems in a region".[1] The conservation of biological diversity is necessary as a matter of ethics, survival and economic benefits.[2] From an ethical point of view, all life forms should be respected regardless of their worth to man. Conservation of biodiversity is also essential for the survival of humans because erosion of biodiversity lessens the Earth's carrying capacity Finally, biodiversity contributes substantially to the economy both directly through the consumptive use of biological resources and indirectly in its contribution to the development of agriculture and modern medicine, as well as the development of biotechnologies

The genetic material in wild species contributes billions of dollars yearly to the world economy in the form of improved crop species, new drugs and medicines[3] Human activities in the last quarter of the twentieth century are reducing biological diversity at an unprecedented rate At the current rate, it has been estimated that one quarter of all the Earth's species will be eliminated within fifty years.[4] Most biological resources are

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[1] WRI, **Global Biodiversity Strategy**, 1992 The Strategy is a document produced by the World Resources Institute (WRI), the World Conservation Union (IUCN) and UNEP as a "complementary initiative" and as "an outline for the diverse actions that will need to be taken by governments and non-governmental organizations alongside and in support of" the Biological Diversity Convention

[2] See generally **Caring for the Earth : A Strategy for Sustainable Living**, IUCN, UNEP & WWF, 1991

[3] *From One Earth to One World*, in WCED, **Our Common Future**, *supra*, Chapter 1, note 1, p 13

[4] P R Erhlich & E. O Wilson, *Biodiversity Studies · Science and Policy*, 253 **Science**, August 16, 1991, p 758, at pp 759-60 At the present time, approximately 1 4 million species of plants,

in the tropical forests in the South Closed tropical forests contain at least 50 per cent and perhaps 90 per cent of the world's species, although they cover only 7 per cent of the Earth's land surface.[5] Tropical forests are important not only as the home of a myriad plant and animal species, but also because they support diverse human cultures whose lifestyles have been adapted to maintenance of biological diversity [6] Between 1980 and 1990, the annual estimated loss in natural forest area was 13.1 million hectares (0.8% in tropical and 0.5% in non-tropical developing countries) and during the same period, an estimated 61 million hectares of tropical forest accounting for more than 10 per cent of the world's tropical forest were lost.[7] Apart from habitat loss which threatens biodiversity, other factors, such as over-exploitation of animal and plant species, soil, water and air pollution, as well as ozone depletion and climate change, can all contribute to threats to biodiversity As will be seen in Chapters 4 and 6, deforestation and loss of biodiversity are serious problems in Thailand which must be addressed by both legal and policy measures.

The WRI identifies the six root causes of biodiversity loss as follows : population growth and increasing consumption, ignorance about species and ecosystems, poorly conceived governmental policies; effects of global trading systems which make developing countries rely heavily on agricultural commodities for export earnings and as a result, push farmers towards large-scale plantations, growing the relatively narrow range of crops demanded by world markets, inequity of resource distribution; and finally, failure to account fully for the value of biodiversity.[8] International law can play a role in regulating activities potentially damaging to the environment Examples in this

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animals, and microorganisms have been given scientific names Terrestrial and freshwater species diversity is greater than marine species The overwhelming elements are the flowering plants (220,000 species) and insects (750,000 species). Known species diversity is only a small fraction of actual species diversity, especially in the invertebrates and microorganisms, *ibid*, p 759

[5] WRI, **World Resources 1992-93**, p 130.

[6] D H Janzen, *Tropical Ecological and Biocultural Restoration*, **Science**, Vol 239, 15 January 1988, p 243

[7] FAO, **State of the World's Forests**, 1995, pp 29-30

[8] **World Resources 1992-93**, *supra*, note 5, pp 134-35

context are international instruments providing for protection of species and habitats.[9]

Even before the adoption of a specific Convention on Biological Diversity itself, conservation of biodiversity had already led to conclusion of a large number of existing *ad hoc* treaties relating to the protection of wildlife, species habitat and forest preservation, until UNCED focused on these problems and the need for a framework Convention specifically devoted to biological diversity The following sections will examine various treaties addressing these issues, identify gaps in their protective coverage of biological diversity and evaluate the effectiveness of the *ad hoc* approach to date. The most relevant treaties are those protecting wildlife in general and those protecting particular species

1. The Protection of Wildlife[10]

The term "wildlife" includes all forms of plant and animal life other than human [11] Before the 1972 UNCHE, the problem of wildlife protection was seen mainly as one of overexploitation particularly of living animal and bird species.[12] Earlier treaties tended to aim at protecting a species or groups of species rather than conserving their natural habitat [13] During the first half of the twentieth century, there was a change of attitude from a utilitarian approach to wildlife protection to one that recognised the relatively new concept that all species should be protected for their own value regardless of their

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[9] There are, of course, limits on what international regulations can do. Most international instruments such as CITES and Ramsar Convention leave it to national governments to enact and implement necessary measures Political and economic factors can pose serious problems for implementation at the national level

[10] For an overview and comprehensive discussion on international laws for the protection of wildlife, see S Lyster, **International Wildlife Law**, Grotius Publications, Cambridge, 1985

[11] Kiss and Shelton, **International Environmental Law**, *supra*, Chapter 1, note 191, p 239

[12] Birnie and Boyle, *supra*, Chapter 1, note 11, p 437

[13] See for example, the 1902 Paris Convention for the Protection of Birds Useful to Agriculture, 102 **BFSP** 969, the 1911 Washington Treaty for the Preservation and Protection of Fur Seals, 104 **BFSP** 175, the 1946 International Convention for the Regulation of Whaling, 161 **UNTS** 72, **UKTS** 5 (1949), the 1950 Paris International Convention for the Protection of Birds, 638 **UNTS** 185

worth to man.[14] Some early international conventions merely provided protection for a single species in specific regions [15] After the World War II, however, an ecosystem approach began to emerge and there are now treaties which pay attention to the protection of wildlife habitat.[16]

The 1972 UNCHE Declaration indicates a fundamental change of attitude in recognizing the importance of conserving wildlife habitat. Principle 4 provides that

> *Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat which are now gravely imperilled by a combination of adverse factors. Nature conservation including wildlife must therefore receive importance in planning for economic development.*

Although the Principle refers vaguely to "adverse factors" which imperil wildlife, the second part of the principle recognises that it is economic development which causes the threats.[17] The ecosystem approach is also reflected in Principles 2 and 3 where it is provided that elements of biodiversity such as flora and fauna as well as other renewable resources should be maintained for the benefit of present and future generations.

The World Conservation Strategy (WCS) lays down certain principles for conservation of living resources and for legal action which will enable their sustainable utilisation.[18]

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[14] Compare, for example, the 1902 Paris Convention for Protection of Birds Useful to Agriculture (102 **BFSP** 969) and the 1950 Paris Convention for the Protection of Birds (638 **UNTS** 185)

[15] For example, the 1972 London Convention for the Conservation of Antarctic Seals, 29 **UST** 441, 11 **ILM** (1972) 251, the 1973 Oslo Agreement on the Conservation of Polar Bears, 27 **UST** 3918, 13 **ILM** (1974) 13, the 1979 Lima Convention for the Conservation and Management of the Vicuna

[16] Examples of treaties which reflect this more modern trend include the 1940 Washington Convention on Nature Protection and WildLife Preservation in the Western Hemisphere, 161 UNTS 193, 1968 African Convention on the Conservation of Nature and Natural Resources, Algiers, 1001 **UNTS** 4, the 1971 Convention on Wetlands of International Importance, 996 **UNTS** 245, **UKTS** 34 (1976), 11 **ILM** (1972) 963, the 1979 Bern Convention on the Conservation of European Wildlife and Natural Habitats, **UKTS** 56 (1982), the 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources, 15 **EPL** (1985) p 64 For discussion of these, see Lyster, *supra*, note 176.

[17] L B. Sohn, *The Stockholm Declaration to the Human Environment*, 14 **Harv.ILJ** (1973) p 423, at pp 459-60

[18] Revised as **Caring for the Earth**, *supra*, note 2

It recognizes that the problems of extinction of species must be addressed simultaneously with the problems of environmental degradation. The WCS identifies ten priority requirements for the maintenance of ecological processes and life-support systems, preserving genetic resources and sustainable use of living resources. These include, *inter alia*, ensuring that utilisation of species and ecosystems does not exceed the determined productive capacities, setting conservation management objectives for use of species and ecosystems, and regulating international trade in wild plants and animals. As far as the required legal action is concerned, several measures are recommended, for example, enactment of laws to protect resources and their ecology, regulation of habitat removal, provision for environmental impact assessment and citizen participation in land use planning.

The World Charter for Nature (WCN) also recognizes the importance of maintaining the "natural processes" and the "diversity of life forms" which have been threatened by excessive exploitation and the destruction of natural habitats. It expresses aspirational goals which, *inter alia*, include the principles that "nature shall be respected and its essential processes shall not be impaired" (Article 1) and "the genetic viability on the earth shall not be compromised, the population level of all life forms, wild and domesticated, must be at least sufficient for their survival, and to this end necessary habitats shall be safeguarded" (Article 2). As stated in Chapter 1, despite the mandatory language used in the, it is not *per se* binding and offers no practical guidance to implementation of the principles enunciated It could, however, influence the development of subsequent customary international law [19]

The necessity for conserving both ecosystems and the diversity of species was further stressed by the WCED. It considered that the problems of disappearing species and threatened ecosystems should be established as a first priority on the political agenda It

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[19] Birnie and Boyle, *op cit*, pp 431-2

recommended such broad measures as improving forest management through reforming forest revenue systems and concession terms, enlarging protected areas, adopting a "Species Convention" and international financial arrangements to support the implementation thereof.[20]

The WCED also adopted 22 legal principles for environmental protection and sustainable development prepared by an international legal experts group appointed by the Commission.[21] Principle 3 provides that :

> *States shall... maintain ecosystems and related ecological processes essential for the functioning of the biosphere in all its diversity....., maintain maximum biological diversity by ensuring the survival and promoting the conservation in their natural habitats of all species of fauna and flora...., observe in the exploitation of living natural resources and ecosystems, the principle of optimum sustainable yield* (emphasis added) [22]

The main ecosytems involved are those referred to in the 1980 WCS as "life-support systems", the most important of which are agricultural systems, forests and coastal and fresh water systems. Their protection requires "rational planning and allocation of uses and high quality management of those uses" in order to prevent, *inter alia*, degradation of soil and habitats, uncontrolled deforestation and pollution [23] For preservation of biological diversity, the measures envisaged are those preventing destruction of habitats, overexploitation of living resources and adverse effects on native species caused by the introduction of exotic species [24] The concept of optimum (OSY), not maximum sustainable yield (MSY), is used because scientists now advise that harvesting species at MSY does not allow a margin for error and lack of adequate data still entails severe risks of stock depletion [25] The problem remains of determining OSY in these circumstances and the extent to which economic, social and political considerations can

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[20] See WCED, *op cit*, note 3, pp 13-14
[21] See Lammers (ed), **Legal Principles for Environmental Protection and Sustainable Development**, *supra*, Chapter 1, note 60
[22] *Ibid*, p 45
[23] *Ibid*, pp 45-46
[24] *Ibid*
[25] *Ibid*

or should be accommodated These problems ultimately tend to be resolved by negotiation in the various fora established or identified in the relevant treaties, or by use of existing concerned international bodies, often at the regional level.

Since it is not possible to analyse all the treaties protecting wildlife and its natural habitat, we will examine briefly those which have been regarded as forming the core of the wildlife protection regime at the global level; the 1971 Convention on Wetlands of International Importance (Ramsar Convention),[26] the 1972 UNESCO Convention for the Protection of World Cultural and Natural Heritage,[27] the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),[28] and the 1979 Bonn Convention on the Conservation of Migratory Species of Wild Animals,[29] all of which address issues of importance to developing countries in general and Thailand in particular. International instruments for the conservation of forests, namely the 1983 International Tropical Timber Agreement, the 1992 Forest Principles will be looked at. In the context of environmental protection in Thailand, the 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources[30] will also be discussed.

2. The 1971 Convention on Wetlands of International Importance Especially as Waterfowl Habitat (The Ramsar Convention)[31]

The Ramsar Convention was the first wildlife protection convention at the global level and the first to focus on the protection of habitat of endangered species It is based on the perception that wetlands, which are found in abundance in Thailand and are under serious threat, are among the most productive sources of ecological support on earth,

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[26] 996 UNTS 245, UKTS 34 (1976), 11 ILM (1972) 936.
[27] UKTS 2 (1985), 27 UST 37, 11 ILM (1972) 1358
[28] 993 UNTS 243, UKTS 101 (1976), 12 ILM (1973) 1085
[29] 19 ILM (1980) 15
[30] 15 EPL (1985) p 64
[31] The Ramsar Convention entered into force on 21 December, 1975 The Convention has been amended twice

acting both as habitat for a myriad species and as flood control regions At present, Thailand is not a Party to the Ramsar Convention, although the country is encountering serious problems concerning depletion of the mangrove forests due to extensive shrimp farming.

Although the original objective of the Convention was to protect the habitat of waterfowl, its importance is now much wider in scope as the ecological value and role of wetlands has become recognized, in particular in supporting marine life, at a time when they are fast disappearing all over the world as a result of drainage for agricultural and developmental purposes As shown in Chapter 6, Thailand has experienced a loss of about half its mangrove forests, one type of wetland habitat, over the last decades. It is evident that other types of wetland habitats have also substantially been lost due to land reclamation for agriculture and urban development, although figures of these other types of wetland habitats loss are not documented. A test case challenging the use of a piece of wetland in Bangkok for constructing governmental buildings has recently been brought against the Government This case is also of particular importance as it raises many legal issues including the rights to a decent environment, and to environmental information discussed in Chapter 1. Thus it will be looked at in more details in Chapter 4

The term "wetlands" is defined by Article 1 of the Convention as including *areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.* This is a very broad definition which can be interpreted to cover diverse habitats, including mangrove swamps, peat bogs, water meadows, coastal beaches, coastal waters, tidal flats, mountain lakes and tropical river systems [32] At the time of ratification or accession, each

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[32] Lyster, *supra*, note 10, p 184.

Contracting Party must designate at least one wetland to be included in the List of Wetlands of International Importance. The selection of wetlands is to be based on their international significance in terms of ecology, botany, zoology, limnology or hydrology (Article 2.2).[33] The List is maintained by the bureau, originally provided by the IUCN on an interim basis (Article 8) Since 1988, a Secretariat has been established as an independent office headed by a Secretary General A Standing Committee was also established at the Regina COP in 1987 to guide the policy and programme of the Convention between meetings of the COP. More recently, at the Kushiro COP in 1993, a Scientific and Technical Review Panel was set up It is to meet once a year to provide scientific and technical assistance to the Standing Committee in the application and review of many of the procedures, criteria and guidelines now established within the Ramsar system [34] The inclusion of a wetland in the List does not prejudice the exclusive sovereign rights of the Contracting Party in whose territory the wetland is situated (Article 2.3). A Party has the right at its own discretion to add to the List further wetlands situated within its territory, to extend the boundaries of those already included in the List, and by reason of its urgent national interests, to delete or restrict the boundaries of wetlands already included by it in the List provided that it inform the Secretariat at the earliest possible time (Article 2 5) and it should, as far as possible, compensate for any loss of wetland resources by creating additional nature reserves for waterfowl and for the protection of an adequate portion of the original habitat (Article 4.2).[35]

The Parties are obliged to promote both the conservation of the wetlands included in the

[33] The criteria for selection were adopted at the 1980 Cagliari Conference and subsequently modified at the Regina Conference in 1987 The criteria adopted at Regina includes, *inter alia*, that a wetland is a particularly good example of a specific type of wetland characteristic of its region, it supports an appreciable assemblage of rare, vulnerable or endangered species or subspecies of plant or animal, and it is of special value for maintaining the genetic and ecological diversity of a region because of the quality and peculiarities of its flora and fauna

[34] M J Bowman, *The Ramsar Convention Comes of Age*, NILR (1995) p 1, at p 38

[35] Up till the Kushiro Conference in 1993, no deletion of sites have been recorded, and although there have been some examples of the restriction of Ramsar sites, the diminution has been small and sometimes it has been more than compensated elsewhere, *ibid* , at p 25

List and the wise use of wetlands in their territory (Article 3.1). They must inform the Secretariat of any changes in the ecological character of any wetland in their territory (Article 3 2) In promoting conservation of wetlands, they must establish natural reserves on wetlands, whether they are included in the List or not, provide adequately for their wardening, encourage research and exchange of data and publications regarding wetlands and their fauna and flora, and promote the training of personnel competent in the fields of wetland research, management and wardening (Article 4). In implementing their obligations, the Parties must also consult and co-ordinate with each other especially in the case of a wetland extending over the territory of more than one Contracting Party or where the water system is shared by Contracting Parties (Article 5). The "wise use" requirement was defined at the Third Meeting of the Conference of the Contracting Parties at Regina in Canada in 1987 as the "sustainable utilization" of wetlands "for the benefit of human kind in a way compatible with the maintenance of the natural properties of the ecosystem". "Natural properties of the ecosystem" was further defined at the same Conference as "those physical, biological or chemical components, such as soil, water, plants, animals and nutrients and the interactions between them".[36]

From the date of its adoption up to 17 November 1995, the Convention has been able to list 765 wetlands situated in 90 countries covering over 52 million hectares in total.[37] About 48 of these countries, which do not include Thailand, are developing countries,[38] thus giving rise to the fact that more participation of those countries is needed to achieve the conservation objectives of the Convention. It is worth noting that of these, about 11 are Asian countries and 4 are Southeast Asian countries which have so far designated

[36] *Report of Third Meeting of the Conference of the Contracting Parties*, Regina, Canada, 27 May - 5 June, 1987, *Recommendation 3 3 Wise Use of Wetlands*

[37] *Directory of Wetlands of International Importance*, prepared and supplied by the Ramsar Convention Bureau

[38] These are Algeria, Argentina, Bangladesh, Bolivia, Brazil, Burkina, Chad, Chile, China, Comoros, Costa Rica, Ecuador, Egypt, Gabon, Ghana, Guatemala, Guinea, Guinea-Bissau, Honduras, India, Indonesia, Iran, Jordan, Kenya, Malaysia, Mali, Malta, Mauritania, Mexico, Morocco, Namibia, Nepal, Niger, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Senegal, Sri Lanka, Suriname, Trinidad, Tunisia, Uganda, Uruguay, Venezuela, Vietnam and Zambia

only 5 wetland sites leaving the rich wetlands of Southeast Asia largely unrepresented It is therefore desirable that Thailand join the Convention as soon as possible and that it, together with other Southeast Asian countries, should designate more sites given the high rate of wetland loss in the region With respect to the existing Parties to the Convention, most of them, especially the developed countries, have exceeded its minimum requirements[39] and some have enacted legislation to require environmental impact assessment of development projects that might affect the listed sites.[40] To encourage wider implementation, particularly in developing countries, a "Wetland Conservation Fund" was established at the Montreux Conference in 1990. Contributions to the Fund derive mainly from voluntary contributions from developed countries and will be used to promote wetland conservation in developing countries.[41] Although several allocations have been made to developing countries, grants have been relatively modest due to the limited available amount in the Fund.[42]

The Ramsar Convention has been criticized as being weak so far as it imposes obligations on Parties to ensure that wetlands included in the list are actually protected and to prohibit activities which would affect their ecological character. Parties are neither required to submit periodic reports on their implementation of the Convention, nor to meet regularly to review its implementation [43] On the other hand, it has been observed that through "clarification. amplification and fulfilment" of the Convention's substantive obligations, as well as development of the supporting financial and

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[39] Up to 17 November 1995, UK, Italy, Australia, Denmark, Spain and Germany have designated 95, 46, 42, 38, 35 and 31 wetland sites respectively

[40] Lyster, *supra*, note 10, p 199, citing as examples Canadian and Japanese laws and planned legislation in Germany and the Netherlands

[41] At the Kushiro Conference, however, it was agreed that while developing countries should continue to be the main focus for support, countries with economies in transition could also be assisted by developed countries or multilateral agencies through funds channelled through the Ramsar administrative system, Bowman, *op cit*, note 34, at p 41.

[42] According to the information supplied by the Ramsar Convention Bureau dated 22 November 1995, the Ramsar Standing Committee at its September 1995 meeting approved 10 regular projects and one emergency project for funding over the coming year to a total value of 346,200 Swiss francs

[43] Lyster, *supra*, note 10, pp 191-2

institutional arrangements over the years, the Convention has achieved a "strength and vitality" which originally were lacking.[44] There is some evidence that Ramsar designation has stimulated protection of specific sites in some State Parties[45] The number of Parties and listed sites have also increased over the years. The establishment of the Wetland Conservation Fund should also help to encourage wider participation and implementation of the Treaty To enhance the effectiveness of the Convention, closer cooperation with the Secretariat of the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) is being pursued, and promotion of the Convention among non-party States including those in Southeast Asia is one of the Ramsar Bureau's workplans[46]

Were Thailand to become a Party to the Convention, it would be able to take advantage of the Fund to help conserve its mangrove areas as well as other wetlands which are seriously threatened by pollution and encroachment from improper land uses Participation in the Ramsar Convention would also help to raise public awareness of the importance of the issue, especially as up till now the ecological values of wetlands have hardly been recognised in the developmental process of this country.

3. The 1972 Convention for the Protection of the World Cultural and Natural Heritage

This Convention, to which Thailand is a Party and generally referred to as "the World Heritage Convention", was adopted under the auspices of UNESCO. The Convention has the objectives of protecting and conserving both cultural and natural heritage of outstanding value Article 2 defines "natural heritage" as ·

natural features consisting of physical and biological formations or groups of

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[44] Bowman, *op cit*, note 34, pp 46-7

[45] D Navid, *The International Law of Migratory Species . The Ramsar Convention*, 29 NRJ (1989) p 1001, at pp 1011-12

[46] *Ibid*, pp 1015-6 Since Navid's article, Indonesia, Malaysia and Philippines have joined the Convention

such formations, which are of outstanding universal value from the aesthetic or scientific point of view;
geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;
natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.

Although the Convention does not provide directly for the protection of wildlife as such, it plays an important role in this because it seeks to protect natural sites which constitute the habitat of threatened species of animals and plants

The Convention is based on the concept of the common heritage of mankind In its Preamble, it considers that "parts of the cultural or natural heritage are of outstanding interest and therefore need to be preserved as part of the world heritage of mankind as a whole". Thus, "it is *the duty of the international community* as a whole to co-operate" for their protection [47] However, as in the case of wetlands, the recognition that such heritage constitutes a world heritage does not affect the sovereignty of the states on whose territory the cultural and natural heritage is situated[48] and the inclusion of a property in the World Heritage List thus requires the consent of the State concerned (Article 11.3)

The Convention is administered by an Intergovernmental Committee for the Protection of the Cultural and Natural Heritage of Outstanding Universal Value, called "the World Heritage Committee". It is composed of 21 State members elected according to "an equitable representation of the different regions and cultures of the world" (Article 8 1 and 8.2). The Committee is assisted by a Secretariat appointed by the Director-General of UNESCO (Article 14.1), and has to establish, keep up to date and publish a "World Heritage List" of qualified properties (Article 11.2). Each State Party has an obligation to submit to the Committee an inventory of property forming part of the cultural and natural heritage situated within its territory and suitable for inclusion in the list (Article

[47] Article 6 1, emphasis added
[48] *Ibid*

11.1). The criteria on the basis of which a property may be included are defined by the Committee (Article 11.5) Selection is generally made in accordance with the Operational Guidelines, which confine listing of natural sites to those of outstanding universal value. One guideline stipulates that a site is to be listed if it provides an important habitat for a threatened species of universal value even if the area has no other outstanding features. In addition to the World Heritage List, a "List of World Heritage in Danger" is established by the Committee. This is a list of property appearing in the World Heritage List for the conservation of which major operations are necessary and for which assistance has been requested under the Convention. This list must contain an estimate of the cost of such operations and may include only cultural and natural heritage which is threatened by serious and specific dangers

A Fund called "the World Heritage Fund", is established for the protection of world cultural and natural heritage of outstanding universal value. The Fund, which was notably an innovative provision at the time of its establishment, is a trust fund consisting mainly of compulsory and voluntary contributions made by the State Parties (Article 15). it is based on the idea of compensating heritage host countries "for the special conservation efforts they make on behalf of the World Community".[49] Currently, the annual value of the Fund is approximately US$ 4 million, about one-third of which is available for the protection of natural heritage sites. Of this, about 99% goes to developing countries [50] Compulsory contributions are to be made regularly every two years. The amount is calculated on the basis of a uniform percentage not exceeding 1 per cent of the contribution to the Regular Budget of UNESCO (Article 16) Thus, richer countries have to pay more than developing countries

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[49] P H Sand, *Trusts for the Earth : New International Financial Mechanisms for Sustainable Development*, in Lang, **Sustainable Development and International Law**, *supra*, Chapter 2, note 26, pp 167-184

[50] Information supplied by the World Heritage Centre, UNESCO, Paris, dated 27 November 1995 Up to 1995, the annual contribution made by Thailand is US$ 4,185

Of great interest to developing countries and in keeping with the Rio Principles is the provision that for purposes of protecting any of its property that forms part of the listed world heritage, a State Party may submit a request for international assistance to the Committee. Assistance granted may take the form of studies, provision of experts, technicians and skilled labour, training of staff and specialists, supply of equipment, low-interest or interest-free loans and, in exceptional cases, non-repayable subsidies (Article 22) However, as a general rule, only part of the cost of the work necessary will be borne by the international community (Article 25). Supervision of implementation by the Parties is exercised through the required submission of periodical national reports to the General Conference of UNESCO, which must give information on the legislative and administrative provisions which the Party concerned has adopted and other action which they have taken (Article 29).

As of 3 October 1995, the Convention had 143 parties The number of sites in the World Heritage List then amounted to over 440 sites in 100 States, of which 326 were cultural, 97 were natural and 17 were of a mixed character. The Convention has been regarded as one of the most complete and successful convention in the area of nature conservation Its provision for funding, which has enabled it to attract more parties, is a model for other treaties such as the Ramsar Convention. Thailand ratified the Convention on 17 December, 1989. Since then three cultural and one natural sites have been listed Up till 24 November 1995, US$ 47,857 have been received from the Fund to assist in the conservation effort, of which US$ 30,000 were granted as emergency assistance in 1995 for the protection of Thung Yai Huai Kha Khaeng wildlife sanctuary [51] There is some scepticism among certain NGO's and academics in Thailand concerning the effects ensuing from listing a site in the World Heritage List, particularly as it involves resettlement of people originally living on the listed sites. However, this negative perception may be due to the failure to see the conservation benefits deriving

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[51] Data sheet supplied by the World Heritage Centre, dated 24 November 1995

from a site being listed as a World Heritage site. A criticism often heard is that the Convention imposes a financial obligation on the country to contribute to the Heritage Fund with no obvious benefits in return. This is probably because few people know that as a Party to the Convention, Thailand is entitled to request international assistance in the conservation of the listed sites if need be. In this respect, it would be helpful if the relevant Thai Governmental Department responsible for coordinating the work under the Convention could be more active in initiating or designing projects to be submitted for international assistance from the World Heritage Committee.

4. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

CITES is an international convention on the protection of wildlife that is traded, the majority of states in the world are parties to it It has also been regarded as one of the most successful treaties in this regard [52] CITES does not provide direct protection and conservation of species and their habitats but seeks to protect certain species of wild fauna and flora against over-exploitation through international trade, i e. it only applies to wildlife that is the subject of trade in one form or another.[53] Although this technique is not new, CITES was the first and the only treaty to use this technique on a global scale.

The Convention works by controlling trade in specimens of species through an export-import permit system "Specimen" is defined in Article 1 as "any animal or plant, whether alive or dead", including "any recognizable part or derivative thereof". Trade in specimens of species is regulated according to the Appendix on which the species is

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[52] Lyster, *supra*, note 10, pp 276-7

[53] The international trade in flora and fauna is estimated by some sources to be worth up to US $20 billion annually Currently, CITES regulates international trade in some 34,000 species Interpol has estimated the value of the international wildlife trade at £5 billion annually, putting it second only in value to the international drug trade The biggest consumers of wildlife are the USA, the European Union, Japan, China, Hong Kong, Taiwan and Korea See EIA, **CITES enforcement not extinction**, London/Washington DC, 1994, pp 5-6

listed Appendix I contains all species threatened with extinction which are or may be affected by trade, and thus must be subject to particularly strict regulation (Article 2 1) The export of any specimen of an Appendix I species requires the prior grant and presentation of an export permit which will be granted when certain conditions are met. These conditions include, *inter alia*, receipt of advice by the Scientific Authority of the State of Export (required by the Convention to be established) that such export will not be detrimental to the survival of that species, and the assurance that the Management Authority of the State of Export (also required to be established) is satisfied that the specimen was not obtained in contravention of the laws enacted by that State for the protection of fauna and flora Most importantly, a Management Authority of the State of Export must be satisfied that an import permit has been granted for the specimen (Article 3) The granting of an import permit is subject to a number of conditions including that a Management Authority of the State of import must be satisfied that the specimen "is not to be used for primarily commercial purposes". According to the latest list adopted by COP 9, 558 species (448 fauna and 110 flora species) are listed on Appendix I [54]

Appendix II comprises species which although not threatened with extinction at present, may become so unless trade in specimens of such species is subject to strict regulation (Article 2.2). The export of any specimen of a species included in this Appendix requires the prior grant and presentation of an export permit which is subject to the same conditions as for Appendix I (Article 4) The major difference is that import requires only the prior presentation of either an export permit or a re-export certificate. Thus, strict limitations on imports do not exist and specimens can be brought in for commercial purposes This has given rise to concern and the Conference of the Parties has made recommendations that parties should ensure that export should not be in such quantities as to be detrimental to the species survival.[55] Currently 264 species (204

[54] Updated Appendices supplied by the CITES Secretariat, valid from 16 February 1995
[55] Lyster, *op cit*, note 10, p 251

fauna and 60 flora species) are listed on Appendix II.[56] Appendix III contains species which any Party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation, and as needing the cooperation of other Parties to control trade (Article 2 3). The regulation of trade in specimens of species listed in this Appendix is the same as that for Appendix II In practice, around 15 States, mostly Latin American States and most notably Ghana, have listed approximately 235 species of fauna and 6 species of flora in this Appendix by 16 November 1995.[57] This reflects the reluctance of most States to forego income derived from this trade.

At the COP I in Berne in 1976, criteria were laid down for the listing and de-listing of species on the Appendices.[58] The Berne criteria have now been replaced by the new listing criteria agreed by consensus at the 9th meeting of the COP at Fort Lauderdale in the USA in 1994. Importantly, the new listing criteria make express reference to the precautionary principle. In the Preamble of the Resolution, it is stated that "when considering proposals to amend the Appendices, the Parties shall, in the case of uncertainty, either as regards the status of a species, or as to the impact of trade on the conservation of a species, act in the best interest of the conservation of the species".[59] A species is considered to be threatened with extinction if, *inter alia*, its wild population is small, has a restricted area of distribution and there is a decline in the number of individuals in the wild.[60] Some numerical examples are provided as "a guideline not a

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[56] *supra*, note 54.

[57] *Ibid* Of these Ghana alone has listed around 133 species of fauna India, Nepal, Malaysia and Thailand are the only Asian countries included, Thailand listed a species of bird in the family of *Gracula religiosa.*

[58] *Proceedings of the First Meeting of the Conference of the Parties, Conf 1 2, 33.* According to the Berne criteria, to qualify for Appendix I, "a species must be currently threatened with extinction" and is "or may be affected by international trade" Although reference is made to a need for scientific information, the criteria do not suggest at what point a population should be considered threatened to be qualified for Appendix I, or "might become" threatened to qualify for Appendix II

[59] *CITES Doc , Com.9 17 (Rev)*, p 2, and Annex 4, p 10 For summary of the main results of the 9th COP, see also CITES · *9th Conference of the Parties*, 25 EPL (1995) p 88

[60] *Com.9 17 (Rev), Annex I*

threshold" for determining whether the criteria have been met [61] The new criteria may make it easier for a species to be listed on Appendix II as they do not require the species to be, or potentially to be threatened with extinction. Instead, a species should be included in Appendix II if, *inter alia*, "it is known, inferred or projected that the harvesting of specimens from the wild for international trade *has, or may have, a detrimental impact on the species*.. ." (emphasis added) [62]

The Convention provides for exemptions for specimens acquired before the provisions of the Convention came into force, specimens which are personal or household effects, animal and plant species included in Appendix I bred in captivity or artificially propagated for commercial purposes, non-commercial loan, donation or exchange between scientists or scientific institutions of specimens and live plant material, and specimens which form part of a travelling zoo, circus, menagerie, plant exhibition or other travelling exhibition (Article 7) The Parties have obligations to take appropriate measures to prohibit trade in specimens in violation of the Convention These measures include measures to penalize trade in, or possession of, such specimens and to provide for the confiscation or return to the State of export of such specimens (Article 8) Each Party must maintain records of trade in specimens of species included in the three Appendixes (Article 8 6) They must prepare periodic reports on their implementation of the Convention in the form of an annual report containing information on trade in specimens of species and a biennial report on legislative, regulatory and administrative measures taken to enforce the provisions of the Convention (Article 8.7) A COP must be convened at least once every two years to review the implementation of the Convention (Article 11). Amendments to Appendices I and II and amendment to the Convention are adopted by a two-thirds majority of Parties present and voting (Articles 15 and 17). It is worth noting that CITES regulates only international trade in

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[61] *Ibid*, *Annex 5* For instance, a decrease of 50% or more in total of some species within 5 years or two generations, whichever is the longer, may constitute a decline
[62] *Com.9 17 (Rev), Annex 2a.*

endangered species It does not cover domestic trade although it is obvious that this is a necessary prerequisite for effective implementation of the Convention.

The major weaknesses of CITES seem to be that enforcement has been left largely to national authorities, leading inevitably to varying standards in implementation. It is generally accepted that lack of adequate personnel and financial resources are the among the greatest shortcomings in the implementation of the Convention. The problems are common in developed, as well as developing countries, but are more acute in the latter [63] Each Party must designate one or more Management Authorities competent to grant permits or certificates. The ambiguity of the term "any readily recognizable part or derivative thereof" also poses some practical difficulties in interpretation and thus application for customs officials, especially in developing countries. Since CITES does not define the phrase, the term is left to divergent interpretations by the Parties. As a result, trade in certain parts and derivatives is regulated in some countries while it is not in others.[64] At the 1977 Special Session of the COP in Geneva, the Parties made an attempt to deal with this problem of the lack of uniformity in construing the term While noting that each Party remains free to determine for itself what is "readily recognizable", it was recommended that the Parties prepare a "minimum list of parts and derivatives regarded as recognizable".[65] However, a subsequent proposed minimum list

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[63] Even in a country with the best resources and the most sophisticated administrative infrastructure such as the USA, implementation of CITES is frustrated by limited staff and resources, see L H Kosloff and M C. Trexler, *The Convention on International Trade in Endangered Species . Enforcement Theory and Practice in the United States*, 5 **Boston UILJ** (1987) p 327, at p 344 Some 800,000 containerised shipments enter the US annually, mostly uninspected Also see EIA, **CITES enforcement not extinction**, *supra*, note 53, p 8, due to underfunding of the US Fish and Wildlife Service, which is responsible for the implementation of CITES, up to 95% of wildlife shipments entering the US receive no physical inspection at all, but are cleared on paperwork alone

[64] Lyster, *supra*, note 10, p 242 The term has also been interpreted by some as covering only raw ivory, not worked ivory As a result, illegal raw ivory could be transported to *entrepot* countries where it is worked to conceal its origins, M J Glennon, *Has International Law Failed the Elephant?*, 84 **AJIL** (1990) p 1, at 18-20

[65] D S. Favre, **International Trade in Endangered Species : A Guide to CITES**, Martinus Nijhoff, Dordrecht/Boston/London, 1989, hereinafter **Guide to CITES** (1989), p 21

was rejected at the second COP.[66] Exemptions made by the Convention for some specimens have posed difficult problems for interpretation and enforcement For instance, the exemption granted to pre-Convention specimens makes it difficult to distinguish between specimens legally and illegally acquired and may open the way to abuse Despite some criteria set by Resolution for issuance of "pre-Convention" certificates, some Parties have continued to issue such certificates in contravention to the criteria.[67] Neither does the Convention define what items to be regarded as constituting "personal and household effects".[68] Another serious problem posed by the Convention's exemptions is that concerning captive breeding of Appendix I animals.[69] Article 7 (4) deems an Appendix I animal bred in captivity to be a species on Appendix II As pointed out clearly by one writer, serious problems which might arise include the risk that caught wild species will be claimed to be captive bred to take advantage of the more lenient standards, and by creating a commercial market for Appendix I species, "it may

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[66] *Ibid* , it was rejected by a vote of 13-11, largely due to the fear of the US, Sweden and some NGOs that a minimum list would become a maximum list, thus limiting enforcement to the minimum list

[67] By a Resolution of the 5th COP (*Resolution Conf 5 11*), a Party is allowed to issue a pre-Convention certificate if the Management Authority of an exporting country is satisfied that at the date on which a specimen was acquired ;
- the species involved was not listed in one of the Convention appendices, or
- its country was not a Party to the Convention, or
- the specimen concerned was subject to a reservation entered by its country with regard to the species involved,

[68] By *Resolution Conf 4 12* at the 4th COP, this is deemed not to include tourist souvenir specimens However, the exemption may apply in certain cases to movements between countries of birds of prey owned by falconers, *in its Report of the Secretariat on Review of Alleged Infractions and Other Problems of Implementation of the Convention*, the Secretariat noted however that some falconers have abused this, *CITES Doc 9 22*, p 8

[69] By *Resolution Conf 2.12 (b)*, the term "bred in captivity" is interpreted to refer to "offspring, including eggs, born or otherwise produced in a controlled environment of parents that mated or otherwise transferred gametes in a controlled environment". For an operation to qualify under this exception, the competent government authorities must be satisfied, *inter alia*, that the parental breeding stock is established in a manner not detrimental to the survival of the species in the wild, maintained without augmentation from the wild ., and managed in a manner designed to maintain the breeding stock indefinitely A test for this last criteria was further adopted to mean that the parental breeding stock must be managed in a manner which has been demonstrated to be capable of reliably producing second-generation offspring in a controlled environment, see also Favre, **Guide to CITES** (1989), *op cit.*, note 65, pp 186-195 A central registry of captive breeding operations was created by Resolution Conf 4 15. The register is kept by the Secretariat but the determination of which operations qualify remains a unilateral act of each Party

be easier for a black market to exist and confuse the enforcement issues".[70] Corruption of enforcement officials may be another factor affecting effective implementation and is particularly of concern in developing countries where wages are low.

In this regard, the Secretariat undertakes limited monitoring of the implementation of the Convention. When the Secretariat is satisfied that specimens of species in Appendices I and II are being adversely affected by trade or that the provisions of the Convention are not being effectively implemented, it communicates such information to the Party or Parties concerned, which must respond by providing relevant facts "insofar as its laws permit" and must propose remedial action. Where the Party considers that an inquiry is desirable, such an inquiry may be carried out. The information provided by the Party and resulting from any inquiry would be reviewed by the next COP which may make any recommendations it deems necessary (Article 13). This does not prevent widespread infringements of the Convention provisions.[71] In this respect, the role of NGOs, such as the Trade Records Analysis of Flora and Fauna in Commerce (TRAFFIC), the Environmental Investigation Agency (EIA), and the Worldwide Fund

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[70] Favre, *Ibid*, p 187. See also, *CITES Doc 9.22, Review of Alleged Infractions* ., *supra*, note 68, p 11; although *Resolution Conf 2.12 (d)* recommends that Parties ensure that export of live animals and parts and derivatives of specimens bred in captivity of Appendix I species be made identifiable by means other than documentation alone, and *Resolution Conf 8.14* recommends that non-reusable tags be attached to raw or processed crocodilian skins and parts entering international trade from the country of origin, these Resolutions continue to be unimplemented by the Parties.

[71] See generally *CITES Doc 9.22*. The Secretariat considers that the control of trade in CITES species by many Parties, both developed and developing countries, "is improving but continues to be inadequate". The major areas of concern include, *inter alia*, improper issuance of export or re-export permits and certificates, misuse of documents, inadequate border controls, and non-implementation of Parties' resolutions including one on the conditions of transport for live animals to reduce mortality in shipment of live animals. Also some Parties do not submit annual reports at all and a large number of Parties are late in submitting reports. Some developing country Parties have not even informed the Secretariat of the designation of their Scientific Authorities. See also *CITES Doc 9.24 on National Laws for Implementation of the Convention*, this study of national laws of 81 countries with high levels of trade in specimens of CITES-listed species reveals that only 15 countries are believed to have legislation that generally meets all requirements for CITES implementation, and 27 countries are believed to have national legislation that generally does not meet any of the requirements for implementation of CITES. Thailand is classified to be among countries which have legislation that meets many requirements for CITES, while needing additional legislation in some areas.

for Nature (WWF) is important in monitoring implementation of the Convention Another means recently employed to secure compliance is the imposition of trade bans in CITES listed species against non-complying countries.[72] It is obvious that successful operation of the procedures instituted by this Convention, vital to achievement of its purposes, can be realised only if Parties have efficient, well briefed and trained officials, within a well organised administrative infrastructure, including the required Management and Scientific Authorities[73] It is also clear that the system is open to abuse and corruption This presents difficulties in all countries, but especially in poorer countries

Another criticism often made is that the Convention allows Parties to make specific reservations with regard to any species included in the three Appendices as well as to any amendment to Appendices I and II (Articles 15 3 and 18) In this situation, the Party making such reservation will be treated as a State not a Party to the Convention with respect to trade in the species concerned.[74] This has adverse impact to the effectiveness of the Convention but, as in other treaties, is thought to be necessary to attract wide participation in CITES

CITES has been seen, even by its critics, as having achieved a degree of success in protecting wildlife The achievement which is often viewed as CITES' most dramatic success is the uplisting in 1989 of all African elephants from Appendix II to Appendix I,

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[72] An example is the Standing Committee's recommended trade ban against Thailand in 1991, see *infra*, pp 130-131

[73] Since their second COP, CITES Parties have developed an Identification Manual which runs to over a thousand pages to help the work of customs officials Efforts to continually update the Manual have encountered difficulties due largely to lack of financial resources and supportive policy, Favre, **Guide to CITES** (1989), *supra*, note 65, pp 26-7

[74] Japan, for example, has entered at least 14 reservations on Appendix I species alone, E McFadden, *Asian Compliance with CITES Problems and Prospects*, 5 **Boston UILJ** (1987) p 311, at pp 313-5 Japan's liberal reservations on Appendix I species, e g several species of turtles and saltwater crocodiles, to meet huge domestic demand have led to significant depletion of the species and threatened them with extinction.

which has resulted in rapid recovery of their population.[75] On the other hand, the world's fragmented populations of rhinos and tigers have continued to decline under CITES. Here the current debates on the improvement of wildlife conservation within the context of CITES are worth noting.[76] Among these is a powerful argument which has been termed by Favre as that of the "Consumptive Use Block". Its essence is that regulated or "sustainable" exploitation of wildlife can provide economic incentives for the conservation of wildlife. This argument is particularly relevant to the present controversy surrounding the retention of African elephants on Appendix I, as some Southern African States whose elephant populations have increased to the extent that culling is necessary seek support for trade in elephant products resulting from culling.[77] Allowing this, they suggest, would generate economic benefits to be used for conservation. However, this position is strongly resisted by environmentalists and writers, such as Favre, because it can easily be abused by wildlife traders and lead to the ultimate depletion of the species concerned.[78]

A number of suggestions have been made to improve the effectiveness of CITES. These include making training and equipment of larger CITES management and scientific

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[75] The uplisting of African elephants has raised the question of retroactive application of law as it applies to specimens acquired on or since 26 February 1976, when the species was first listed by Ghana on Appendix III, for detailed discussion of this issue, see P J Sands and A P Bedecarre, *Convention on International trade in Endangered Species: The Role of Public Interest Non-Governmental Organizations in Ensuring the Effective Enforcement of the Ivory Trade Ban*, 17 **Environmental Affairs** (1990) p 799. At the 9th COP, the Parties upheld a five-year old ban on ivory sales. Sudan's proposal to sell its stockpiled ivory was rejected. However, it was agreed that an "intersessional mechanism" be set up to find a solution which is acceptable to all Parties by the time of the next COP.

[76] D Favre, *Debate within the CITES Community: What Directions for the Future?*, 33 **NRJ** (1993) p 875.

[77] The ban on international trade in elephant products (hides, ivory and meat) has currently provoked controversy, especially in countries where, due to successful conservation programmes, the population of elephants has grown beyond ecological capacity to sustain them, see *Baby elephants for sale as Zimbabwe herds grow*, **Sunday Times**, 22 January 1995, p 17. Southern African States such as Zimbabwe, South Africa and Botswana now have too many elephants. Zimbabwe wants to sell 5,000 elephants, which are only a fraction of the 40,000 elephants they want to cull.

[78] *Ibid*, pp 883-90.

authorities part of debt-for-nature swaps,[79] introducing a system of provisional listing of an endangered species by the Secretariat (which would enable imposition of a provisional ban on trade in the species and thus prevent stockpiling) subject to subsequent approval by the COP,[80] amendment of reservation clauses to limit the number, and the duration of reservations that a State can enter, and to provide for periodic review of all reservations at the Parties' biennial Conference,[81] restricting reservation by permitting them only in cases where the species or the product in question substantially contributes to the economic well-being of a country,[82] provision in domestic legislation for increased penalties for violation of CITES and economic sanctions against violating Parties,[83] curtailing or cutting off trade in wildlife and wildlife products with countries which fail to submit annual reports, and establishment of computerized data bases to analyse trade statistics,[84] and provision of financial assistance from developed countries to help developing countries improve implementation of the Convention.[85] Above all the greatest shortcomings of CITES are

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79 K J Liwo, *The Continuing Significance of the Convention on International Trade in Endangered Species of Wild Fauna and Flora During the 1990's*, 15 **Suffolk TLJ** (1991) p 122, at p 150 "Debt-for-nature swap" is a term normally used to describe an agreement under which an international environmental organization purchases the debt of a heavily indebted country on the secondary market, usually a bank, in exchange for the indebted country's or the beneficiary government's commitment to undertake conservation measures or to make payment in local currency for conservation purposes

80 Glennon, *supra*, note 64, at p 41.

81 G G Stewart, *Enforcement Problems in the Endangered Species Convention . Reservations Regarding the Reservation Clauses*, 14 **Cornell ILJ** (1981) p.429, at pp 446-7.

82 McFadden, *supra*, note 74, at pp 321-5

83 *Ibid*

84 J B. Heppes, E J McFadden, *The Convention on International Trade in Endangered Species of Wild Fauna and Flora Improving the Prospects for Preserving Our Biological Heritage*, 5 **Boston UILJ** (1987) p 229, at pp 235-6

85 *Ibid* , p 240 As observed by Birnie, "CITES makes heavy demands upon its Parties, many of which remain ill-equipped to meet them". Were CITES to be renegotiated today, various principles enunciated in the Rio Declaration, including the principle of "common but differentiated responsibility" would be included in its Preamble, P Birnie. *The Case of the Convention on Trade in Endangered Species*, paper presented at the symposium on "Enforcing Environmental Standards . Economic Mechanisms As Viable Means ?", Heidelberg, 5-7 July 1995, p 30 At the 9th COP, a Resolution recognising the need for additional enforcement measures to reduce illegal trade was agreed It urged, *inter alia*, that there should be additional funds for the Secretariat's enforcement project, and closer cooperation between responsible institutions at the international and national levels However, the Parties failed to agree on a proposal to set up a CITES Enforcement Working Group

obviously the inadequate human and financial resources to implement the Convention at the national level

As of August 1995, the Convention has 130 Parties. Thailand ratified the Convention on 21 January 1983. So far as implementing the onerous administrative and enforcement demands of the Convention is concerned, Thailand's record reveals infringements of its provisions. In 1991, the CITES Standing Committee recommended that CITES Parties prohibit all trade in endangered species with Thailand.[86] According to the CITES Secretariat, although Thailand was a Party to the treaty, it was serving as a "revolving door" for illegal trade However, at the Kyoto Conference in 1992, the Standing Committee reviewed the efforts of Thailand and its adoption of domestic legislation to implement CITES. As a result, a new notification was issued on 2 April, 1992 by the Secretariat recommending the trade ban to be lifted. It is therefore important to examine further the numerous problems relating to enforcement in a developing country such as Thailand and to identify gaps in its relevant substantive laws so that compliance can be improved and thus sustainable use of species promoted It is intended to conduct such an examination and, it is hoped, identify answers to some of these questions in Chapter 6.

5. The 1979 Bonn Convention on the Conservation of Migratory Species of Wild Animals

In contrast to CITES, the Bonn Convention' achievements are far more modest, both in terms of the number of Parties and its progress. The Convention was concluded on 23 June, 1979, but it did not enter into force until 1 November, 1983 and to date has 44 parties. The objective of the Convention is to protect those species of wild animals that migrate across or outside national boundaries in accordance with Recommendation 32 of the Action Plan adopted by the 1972 UNCHE.[87] The term "migratory species" is

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[86] CITES Secretariat, *Thailand Ban on Wild Fauna and Flora*, Lausanne, 12 April, 1991
[87] See the Preamble of the Convention

defined as "the entire population or any geographically separate part of the population of any species or lower taxon of wild animals, a significant proportion of whose members *cyclically and predictably* cross one or more national jurisdictional boundaries" (emphasis added)[88] The Convention uses a system of listing Appendix I lists migratory species which are endangered and thus require immediate action by Range States[89] Parties are under an obligation to prohibit the taking of animals belonging to such species.[90] They must also endeavour to conserve and restore their habitats, to prevent and remove the adverse effects of activities or obstacles that seriously impede or prevent the migration of the species, and to prevent, reduce or control factors that are endangering or are likely to further endanger the species.[91] Appendix II lists migratory species which have "an unfavourable conservation status" and which require international agreements for their conservation and management or those which have a conservation status which would significantly benefit from the international co-operation that could be achieved by an international agreement.[92] Therefore, the requirements are much less strict for species under Appendix II, depending on conclusion of AGREEMENTS (*sic*). Four AGREEMENTs have been concluded to date.[93]

The Convention also suffers from use of ambiguous terms, under-funding (due to failure of many parties to pay their contributions and expenses), the small number of parties,

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88 Article 1 1 (a)

89 Article 3.1 According to Article 3 2 "a migratory species may be listed in Appendix I provided that the best scientific evidence available, indicates that the species is endangered " At present, around 50 species are listed in Appendix I, including the Siberian crane, white-tailed eagle, hawksbill turtle, Mediterranean monk seal, and dama gazelle

90 Article 3 5.

91 Article 3 4

92 Article 4 1.

93 D Hykle, *Bonn Convention . Outcome of the Fourth Meeting of the Conference of the Parties*, 24 EPL (1994) p 251, at p 252 These are agreements to conserve seals in the Wadden Sea, bats in Europe, small cetaceans of the Baltic and North Seas, and the western and central Asian populations of the Siberian crane Draft agreements for the conservation of a number of other species are also underway, including a draft agreement on the conservation of African-Eurasian migratory waterbirds

poor attendance at the triennial Conferences of the Parties and political compromises involved in listing species [94] In many ways, the potential of the Convention is far from realization.[95] Thailand is not yet a party to it. The issue of protection of migratory species has hardly been put on the agenda for regional and international cooperation As this is unlikely to become a priority issue among the numerous environmental problems of Thailand, the Convention will probably remain insignificant from its perspective in the near future

6. The Conservation of Forests

6.1 The International Tropical Timber Agreement (ITTA)

Providing for conservation of forests and natural resources was not the main purpose of the 1983 ITTA. Nevertheless, it remains the most important single multilateral effort to deal with forest conservation to date. Its stated objectives were to provide an effective framework for co-operation and consultation between countries producing and consuming tropical timber and to promote expansion and diversification of international trade in tropical timber and the improvement of structural conditions in the tropical timber market. Nevertheless, the ITTA did recognise the need to preserve and protect tropical rain forests by including among its goals those of promoting and supporting research and development with a view to improving forest management and wood utilisation, encouraging Parties to support and develop industrial tropical timber reforestation and forest management activities, and encouraging the development of national policies aimed at sustainable utilisation and conservation of tropical forests and their genetic resources and maintaining the ecological balance in the regions

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[94] For discussion of substances and problems of the Bonn Convention, see Birnie and Boyle, *op cit*, pp 470-475

[95] As pointed out by Lyster, without the participation of the Range States of the listed species, the inclusion of the species in the Appendix for protection is irrelevant An example is the status of the kouprey (Bos Sauveli), the habitat of which is in the forest areas of Kampuchea, Laos and Thailand Its survival thus depends on cooperative establishment of sanctuaries in these three States but none of the States is Party to the Convention, S Lyster, *The Convention on the Conservation of Migratory Species of Wild Animals*, 29 **NRJ** (1989) 979, at 986

concerned.[96]

The 1983 ITTA expired in March 1994. A Successor Agreement was negotiated and adopted in Geneva on 26 January, 1994,[97] consisting of a Preamble, 48 Articles and two annexes.[98] On the whole, it maintains its character as primarily a commodity agreement but incorporates more environmental aspects than the 1983 Agreement Reference is made in the Preamble and among the objectives to the commitment of the Parties made in Bali in 1990 to achieve exports of tropical timber products from sustainably managed sources by the year 2000. The conservation objectives as contained in the 1983 Agreement are maintained [99] More conservation objectives are added to the 1994 Agreement. These are, *inter alia*, to contribute to the process of sustainable development, to enhance the capacity of members to implement a strategy for achieving exports of tropical timber and timber products from sustainably managed sources by the year 2000, and, importantly, to develop and contribute towards mechanisms for the provision of new and additional financial resources needed to enhance the capacity of producing members to attain the objectives of the Agreement.[100] A fund called the Bali Partnership Fund is established to assist producing members to make the investments necessary to enhance their capacity to achieve exports of tropical timber and timber products exclusively from sustainably managed sources by the year 2000.[101] In a tone similar to that which the Conventions on Biodiversity and on Climate Change adopted at Rio, it is provided that the ability of the producing members (all are developing countries) to implement the strategy "will be

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[96] Article 1 (c),(f) and (h)

[97] The United Nations Conference on Tropical Timber 1993 met in Geneva from 13 to 16 April 1993, 21 to 25 June 1993, 4 to 15 October 1993 and from 10 to 26 January 1994

[98] The text of the ITTA Successor Agreement 1994 was reprinted in 24 **EPL** (1994) p 124, 33 **ILM** (1994) 1014

[99] These are the objectives of promoting and supporting research and development with a view to improve forest management and wood utilisation, encouraging the development of national policies aimed at sustainable utilisation and conservation of tropical forests and their genetic resources, and maintaining the ecological balance in the regions concerned

[100] Article 1 (c), (d), and (g)

[101] Article 21

influenced by the availability of resources".[102]

The institutions established under the 1983 Agreement are continued, including the International Timber Organization (ITTO) to administer the ITTA provisions and supervise the operation of the Agreement.[103] The ITTO also functions through the International Tropical Timber Council (ITTC) which consists of all the members of the organization [104] Under Article 26, four committees under the previous Agreement are maintained.[105] That on Reforestation and Forest Management has among its functions the promotion of cooperation between members in the areas of reforestation, rehabilitation and forest management, and encouraging the increase of technical assistance and transfer of technology in these fields.[106]

The ITTA 1994 has been criticized by almost all environmental groups as a disappointing compromise. During the negotiation thereof, the demands that the Agreement should cover all types of timber and that this should all come from sustainably managed forests were dropped in the face of fierce opposition from many States concerned, especially the US, the EU and Canada.[107] Instead, consumer countries pledged to adopt "appropriate guidelines and criteria" for sustainable management of their forests and to provide "appropriate resources" to developing countries for their conservation programmes. In return, developing countries pledged to adopt specific policies for sustainable forest management by the year 2000 [108] The ITTA 1994 indicates that members of the international community still give priority to

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[102] Article 21 (5)
[103] Article 3.
[104] Article 6
[105] These are the Committees on Economic Information and Market Intelligence, Reforestation and Forest Management, Forest Industry, and Finance and Administration
[106] Article 27
[107] See F. Yamin, *Negotiating of a Successor Agreement to the International Tropical Timber Agreement*, 4 **YIEL** (1993) p 265. Producing countries, led by Malaysia, wanted to extend the scope of the ITTA to cover all timber from all forests, especially temperate forests, while consumer countries represented by the US wished to maintain the tropical timber focus of ITTA
[108] See UNCTAD, *ITTA Successor Agreement*, 24 **EPL** (1994) p 69

trade and economic interests over the need for environmental conservation. Indeed, it has been observed quite rightly that the ITTO's voting system as provided in the Agreement is designed to further trade interests rather than environmental concerns.[109] The votes are divided equally between producing and consuming countries, each group being allocated 1000 votes [110] The votes are distributed within each group according to each country's economic interests in tropical timber trade [111] Thailand is listed as a producing country but is among the smallest of this group in terms of export volume and the votes allocated [112] The ITTA will probably not be as significant to the conservation of forests in Thailand as expected In any case, it is unlikely to provide an effective forum within which to develop conservation strategies, although it does possess the potential to do so if the countries that have large areas of forests cooperate

6.2 The 1992 Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests[113]

The 1992 Statement of Forest Principle, which as its title indicates is not legally binding, is the weakest of the five instruments adopted at UNCED. The issue of forests was one of the most contentious to be debated at the Conference [114] Developing countries, notably in South America, Southeast Asia, and Southwest Africa strongly resisted negotiation of a global Convention on forests. This is understandable in view of their

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[109] D König, *New Approaches to Achieve Sustainable Management of Tropical Timber*, paper presented at the symposium on "Enforcing Environmental Standards · Economic Mechanisms As Viable Means ?, Heidelberg, 5-7 July 1995, p 17

[110] See Annex A and Annex B of the 1994 Agreement Each Annex lists 33 producing and consuming countries respectively with the number of votes allocated to each country

[111] Thus Japan which is the largest consuming country has the most votes (320), followed by the EU (302), South Korea (97), and the US (51) Similarly within the producing countries group, Indonesia which is the largest net exporter has most votes (170), followed by Malaysia (139), and Brazil (133)

[112] Thailand is allocated only 20 votes, compared to Indonesia (170), Malaysia (139) and Brazil (133) As will be seen in Chapter 4, Thailand has largely exhausted its forest timber resources

[113] 31 ILM (1992) 881.

[114] On the problems and confrontation between countries of the North and of the South leading up to the Forest Principles, see H M Schally, *Forests Toward an International Regime ?*, 4 YIEL (1993) p 30.

fear of losing sovereignty over their natural resources and suspicion of developed countries' attempts to single out tropical forests as the primary object of negotiation because of their involvement in the issues of climate change and biodiversity.[115]

The title of the instrument reflects its humble status and the resistance of developing States to accepting obligations on the issues involved The Statement consists of a Preamble and 15 principles. The Preamble recognises that the principles reflect a first global consensus on forests It states that forestry issues and opportunities should be examined in a holistic and balanced manner within the overall context of environment and development, that the principles should apply to *all types of forests* and that their sound management and conservation is of *concern to the Governments of the countries to which they belong* and are of value to local communities and to the environment as a whole (emphasis added). The Principles affirm that "States have the sovereign and inalienable right to utilize, manage and develop their forests in accordance with their development needs and level of socio-economic development and on the basis of national policies consistent with sustainable development and legislation".[116] Governments should promote and provide opportunities for the participation of interested parties, such as local communities and indigenous people, NGOs and women etc. in the development, implementation and planning of national forest policies [117] Environmental impact assessment should be carried out where actions are likely to have significant adverse impacts on important forest resources and where such actions are subject to the decision of a competent national authority.[118] The cost of forest conservation should be shared by the international community[119] and specific financial resources should be provided to developing countries that have significant areas of forest

[115] The introduction of trade measures in some developed countries, e g the Austrian Tropical Timber Labelling Act of 1992, only served, although this was subsequently amended to allay objections, to heighten developing countries' suspicion of developed countries' motives, see *ibid* , p 38
[116] Principle 2 (a)
[117] Principle 2 (d)
[118] Principle 8 (h)
[119] Principle 1 (b)

for the conservation of which they establish programmes including protected natural forest areas [120] It also states that new and additional financial resources should be provided to developing countries to enable them to sustainably manage, conserve and develop their forest resources, including through afforestation, reforestation and combating deforestation and forest and land degradation.[121] Those exercising a right of access to biological resources, including genetic material, must pay due regard to the sovereign rights of the countries where the forests are located and to the sharing, on mutually agreed terms, of technology and any profits from biotechnology products that are derived from these resources.[122] Open and free international trade in forest products should be facilitated [123] Unilateral measures to restrict or ban international trade in timber or other forest products should be removed or avoided.[124] Reduction or removal of tariff barriers and impediments to the provision of better market access and better prices for higher value-added forest products and their local processing should be encouraged in order to enable producer countries the better to conserve and manage their renewable forest resources.[125] Finally, fiscal, trade, industrial, transportation and other policies and practices that may lead to forest degradation should be avoided [126]

Generally, the Forest Principles were poorly drafted and represent the failure of the international community to reach consensus on issues of great importance especially as conservation of forests is essential for the preservation of biodiversity as well as for dealing with the problem of global climate change.[127] Yet the provisions outlined

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[120] Principle 7 (b)
[121] Principle 10
[122] Principle 8 (g)
[123] Principle 13 (a)
[124] Principle 14
[125] Principle 13 (b)
[126] Principle 13 (e)
[127] As one writer observed, this elaborate set of principles produced by the Rio Conference "represents less substantial progress than the single paragraph (12 40) of Agenda 21 calling for a new Convention to Combat Desertification to be finalized by 1994, which has since been heeded by a UN General Assembly resolution getting the process underway", P H Sand, *UNCED and the Development of International Environmental Law*, 3 **YIEL** (1992) p 3, at p 10

above do indicate the major points of concern for developing countries and these are likely to be the main issues in a negotiation of a global Convention on the forests, if that is ever forthcoming. The Forest Principles do not recognize that forests are an area of "common concern". Instead, the Statement affirms States' sovereign rights over their forest areas. It is foreseeable that this position will remain unchanged in any future binding instrument Similarly, developing countries will ensure that the provision of financial resources to them in support of their conservation efforts will remain high on the negotiating agenda.

7. The 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources

The ASEAN Agreement is the only regional conservation agreement existing in Asia or Southeast Asia at present. Given the size of the geographical area, its population and the economic growth which makes the countries in the region potential major polluters, it is important to develop further efforts to tackle environmental problems

The ASEAN Agreement was concluded in 1985 by the then six member countries of ASEAN.[128] It contains several innovative features and incorporates the most recent developments in environmental awareness, covering substantial obligations in every domain in which environmental problems can arise The Agreement is divided into eight chapters. The Preamble recognises the importance of natural resources for present and future generations and the interrelationship between conservation and socio-economic development The wording in Articles 2 and 3 derives from the World Conservation Strategy. The Contracting Parties undertake to adopt "the measures necessary to maintain essential ecological processes and life-support systems, to preserve genetic diversity, and to ensure the sustaintable utilization of harvested natural

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[128] The Association of Southeast Asian Countries (ASEAN) was formed in 1965 At present, it comprises Brunei (joined 1984), Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam (joined 1995)

resources under their jurisdiction...".[129] They must develop a national conservation strategy[130] and, in the formulation of all development plans, give as full consideration to ecological factors as they do to economic and social ones [131] The Parties accept obligations to maintain maximum genetic diversity and to conserve animal and plant species by creating and maintaining protected areas, regulating the taking of species and prohibiting unselective taking methods, regulating and prohibiting the introduction of exotic species and promoting and establishing gene banks and other documented collections of animal and plant genetic resources.[132] They must adopt management plans for harvested species to maintain them at a sustainable level.[133] The Agreement provides directly for conservation of forest areas. The Parties must take all necessary measures to ensure the conservation of the vegetation and forest cover on lands under their jurisdiction. The measures to be taken include, *inter alia*, controlling clearance of vegetation, preventing overgrazing, setting aside areas as forest reserves, avoiding as far as possible monoculture causing ecological imbalances in reforestation and afforestation planning and ensuring the conservation of their natural forests, particularly mangroves.[134] Protection of other elements of the ecological systems is also provided for The Parties undertake to take measures towards soil conservation, improvement and rehabilitation, prevention of soil erosion and other forms of degradation. They must take all appropriate steps towards the conservation of their underground and surface water resources, and air quality management compatible with sustainable development.[135]

In addition, the Agreement has some innovative provisions for the conservation of ecological processes. These include, for instance, promotion of environmentally sound

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[129] Article 1(1)
[130] Article 2 (2)
[131] Article 2 (2)
[132] Article 3
[133] Article 4.
[134] Article 6
[135] Articles 7, 8 and 9.

agricultural practices by controlling, *inter alia*, the application of pesticides, fertilizers and other chemical products for agricultural use ; promotion of pollution control and the development of environmentally sound industrial processes and products.[136] These are to be achieved through promoting adequate economic or fiscal incentives.[137] The polluter pays principle is adopted in the requirement that the Parties should hold the originator of an activity which may lead to environmental degradation responsible for its prevention, reduction and control, as well as for any rehabilitation and remedial measures required [138] Further, they must endeavour to prevent, reduce and control polluting discharges and emissions by, for instance, making such controls conditional on appropriate treatment of polluting emissions and establishing national environmental quality monitoring programmes.[139]

Chapter IV provides for environmental planning measures. The Parties are to give as full consideration as possible to ecological factors as to economic and social ones in the land-use planning process, consider the importance of the naturally high productivity of areas such as coastal zones and wetlands; and establish terrestrial, freshwater, coastal or marine protection areas, particularly those which constitute the critical habitats of species.[140] Protected areas include national parks and reserves around which terrestrial or aquatic buffer zones should be established.[141] Environmental impact assessments must be carried out for any activity which may significantly affect the natural environment.[142] The Agreement further provides for such national supporting measures as, scientific and technical programmes, education programmes, public participation in planning and implementation of conservation measures and programmes and facilities for training of adequate and sufficient scientific and technical

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[136] Article 10 (a) and (b).
[137] Article 10 (c)
[138] Article 10 (d)
[139] Article 11
[140] Article 13 (1).
[141] Article 13 (3)
[142] Article 14

personnel.[143] International co-operation in management of shared resources and transfrontier environmental effects are also provided [144]

Thus, it can be seen that the ASEAN Agreement is a very comprehensive international instrument which covers cross-sectoral issues in line with the modern integrated approach. The Agreement is, however, similar to other treaties in terms of the weakness of its enforcement mechanism Implementation is supervised by the Meeting of the Contracting Parties which must be held at least once every three years to review this, amend any Appendix to the Agreement, consider reports submitted by Parties and make recommendations. A Secretariat was also to be designated upon the entry into force of the Agreement.[145] As the Agreement does not provide for reservations to any Article to be made by the Parties, it is unclear whether reservations, which have undermined the effectiveness of many treaties will be accepted in practice as international law concerning this is ambiguous in many respects [146] Further, the mechanism for settlement of disputes consists only of consultation or negotiation. No recourse to arbitration or judicial settlement is required

Despite, or perhaps because of, the advanced and innovative provisions of the Agreement, it has not come into force and thus remains largely "a sleeping treaty", to

[143] Articles 15 and 16
[144] See Articles 19 and 20
[145] See Chapter VII, Articles 21 and 22
[146] See Brownlie, **Principles**, *supra*, chap 1, note 42, pp 608-611, Lord Mcnair, **The Law of Treaties**, Clarendon Press, Oxford, 1961, pp 158-177, H W A. Thirlway, **International Customary Law and Codification**, A W Sijthoff-Leiden, 1972, pp 117-124 It seems that the formerly accepted rule that reservations were not valid unless the treaty permitted reservations and such reservations were accepted by all other parties has now been supplemented by a more flexible system which treat a reserving State as a Party *vis-a-vis* non-objecting States if the reservation is "compatible with the object and purpose of the Convention". In support of this, see the ICJ's advisory opinion in *Reservations to Genocide Convention*, **ICJ Reports** (1951) 15, concerning the admissibility of reservations to the Genocide Convention (78 **UNTS** 277) which was silent on the subject However, Article 20 (2) of the Vienna Convention on the Law of Treaties [8 **ILM** (1969) 679] provides that where there are a limited number of states involved and the application of the treaty in its entirety between all the parties is an essential condition of the consent of each State to be bound by the treaty, a reservation requires acceptance by all the parties It is arguable that this situation applies to ASEAN

use Lyster's terminology for certain wildlife treaties. As will be seen in Chapter 7 concerning the developments in ASEAN in the area of environmental protection, the Agreement in its present form is unlikely to be implemented. It can be said that the Agreement runs ahead of environmental thinking or awareness in the region. For the past decades, environmental issues have not been high on the agenda of ASEAN. The governments of the countries concerned have been more preoccupied with political and international trade issues and for the present, priority will probably still be accorded to programmes and policies relating to the newly established ASEAN Free Trade Area (AFTA).[147] The dramatic economic growth in the region during the last decade, particularly in Malaysia, Singapore and Thailand, has accelerated this policy trend. Yet economic growth has aggravated environmental problems and there is certainly a need to integrate environmental considerations into development policies, as UNCED and Agenda 21 require. Thailand is just beginning to embrace an integrated and cross-sectoral approach, as the enactment of the Enhancement and Conservation of National Quality Act of 1992 illustrates [148]

8. The 1992 Convention on Biological Diversity (CBD)[149]

One of the major items on the agenda for UNCED was the drafting of a treaty to prevent decline in biological diversity [150] It was completed in time for UNCED and was opened for signature on June 5, 1992 and entered into force on 29 December, 1993, ninety days after having achieved the 30 ratifications required by Article 36 [151] By and large, it is a framework Convention which leaves most of the details to be implemented by individual Parties and subsequent protocols. As in the FCCC, its Preamble affirms

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147 See Chapter 7 for more details
148 See Chapter 4
149 31 ILM (1992) 818
150 For a full account of the negotiation of this Convention, see D E. Bell, *The 1992 Convention on Biological Diversity : the Continuing Significance of U S Objections at The Earth Summit*, 26 Geo. Wash. JILE (1993) p 479, at pp 500-7.
151 As of January, 1996, there are 138 ratifications These include some Asian States such as China, India, Japan, Mongolia, Myanmar, Nepal, and some ASEAN States i e Indonesia, Malaysia, Philippines and Vietnam Thailand is currently considering ratifying the Convention

that the conservation of biological diversity is "a common concern of mankind", rejecting the formerly held view that biological resources are a common heritage of mankind However, it can be argued that by asserting the issue as one of a common concern, preservation of biodiversity can no longer be regarded as the exclusive internal affair of any single State, but has become the concern of all the States acting in trust for future generations.[152] The legal consequence of the "common concern" has also been viewed as constituting the duty of cooperation among States in the conservation of biodiversity.[153] The objectives of the CBD are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of benefits arising out of the utilization of genetic resources [154]

Biological diversity is defined as "the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part, this includes diversity within species, between species and of ecosystems".[155] These are often expressed as genetic diversity, species diversity and ecosystem diversity respectively. Article 3 of the CBD incorporates Principle 21 of the UNCHE Declaration, that States have the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction, into the substantive part of a treaty text for the first time.

The prime importance is given to *in-situ* conservation although it is acknowledged that *ex-situ* measures, preferably in the country of origin, also have an important role to play

[152] R Wolfrum *The Convention on the Protection of Biological Diversity · Using State Jurisdiction as a Means of Ensuring Compliance*, paper presented at the symposium on "Enforcing Environmental Standards · Economic Mechanisms As Viable Means ?", 5-7 July, 1995, p 10, on file with the writer

[153] M C Maffei, *Evolving Trends in the International Protection of Species*, 36 **GYIL** (1994) p 131, at p 165

[154] Article 1

[155] Article 2

in complementing *in-situ* measures [156] Parties undertake *inter alia*, to establish a system of protected areas to conserve biological diversity, to promote environmentally sound and sustainable development in areas adjacent to protected areas, to rehabilitate and restore degraded ecosystems and promote the recovery of threatened species and prevent or control the introduction of alien species which threaten ecosystems, habitats or species.[157] They must conduct environmental impact assessment of proposed projects that are likely to have significant adverse effects on biological diversity and, "where appropriate", allow for public participation in such procedures.[158] The role of indigenous and local communities in the conservation of biodiversity and sustainable use of its components is recognized [159] However, the Parties' obligations to "respect, preserve and maintain knowledge, innovations and practices" of indigenous and local communities and to "encourage the equitable sharing" of the benefits arising from the utilization of such knowledge, innovation and practices are "subject to their national legislation".[160] The subjection of these rights to the extent prescribed by national laws has the result of negating these obligations, and reflects the reluctance of some countries to commit themselves to recognising the rights of indigenous and local communities

The general environmental provisions of the CBD have been criticised for their weak treatment of the precautionary principle and environmental impact assessment.[161] It has been observed that the removal of the precautionary principle from the substantive articles to the Preamble is potentially detrimental as it may leave states too much freedom to pursue unsustainable development policies as has frequently been the case in the management of fisheries resources.[162] Regarding environmental impact assessment, the fact that the Parties have an obligation to introduce the procedure "as far

156 See Preamble, Articles 8 and 9
157 Article 8
158 Article 14
159 See Preamble, para 12, and Article 8 (j)
160 *Ibid*
161 A E Boyle, *The Convention on Biological Diversity*, in Campiglio et al (eds), **The Environment After Rio** (1994), pp 111-127, at pp 116-119
162 *Ibid*, p 116

as possible and as appropriate" may enable them to avoid an EIA when it is inconvenient to conduct one.[163] Furthermore, the obligation to conduct an EIA does not apply to a Party's national programmes and policies. In such cases, the Parties need only "ensure that the environmental consequences" of their programmes and policies are duly taken into account.[164]

The cornerstones of the Convention seem to lie in Articles 15 and 16. Article 15, which deals with access to genetic resources, recognizes the sovereign rights of states over their natural resources. It provides that the authority to determine access to genetic resources rests with the national governments and is subject to national legislation. This is important because until recently, genetic resources had been considered to be freely accessible to any and every one from any State, a concept endorsed by the 1983 FAO International Undertaking on Plant Genetic Resources [165] As of September 1995, the Undertaking has been adhered to by 110 States [166] Based on the "principle that plant genetic resources are a heritage of mankind and consequently should be available without restriction",[167] it is mainly concerned with the preservation of plants for agriculture and seeks to regulate access to all plant genetic resources on an equal footing, i e. farmers' landraces, traditional varieties, wild relatives of plants, and improved plant varieties. States adhering to the Undertaking are to make plant genetic resource samples available for scientific research, plant breeding or genetic resource conservation "free of charge, on the basis of mutual exchange or mutually agreed

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163 *Ibid* , p 118

164 *Ibid* and Article 14 (1) (b)

165 *International Undertaking on Plant Genetic Resources*, FAO Res 8/83, reprinted in H Hohman (ed), **Basic Documents of International Environmental Law**, Vol 1, 1992, pp 113-18 The Undertaking has subsequently been qualified by three Annexes which recognise, *inter alia*, the compatibility of the Undertaking with national systems of breeders' rights and the understanding that free access does not mean free of charge (Annex I, Resolution 4/89, 1989), the concept of Farmers' Rights (Annex II, Resolution 5/89, 1989), and the Undertaking's compatibility with sovereign rights over plant genetic resources

166 Information supplied by FAO, Rome, dated 12 February 1996. Thailand has not adhered to the Undertaking but is a member of the Commission on Plant Genetic Resources (of which 138 countries have become members) which monitors implementation of the Undertaking

167 *supra*, note 166, Article 1

terms".[168] However, since its adoption the Undertaking has been controversial and it has not worked to facilitate developing countries' access to genetic stocks already protected by patents and plant breeders' rights certificates in developed countries which have since then been further strengthened.[169] Plant breeders' rights in developed countries have been systematically protected under the 1961 UPOV Convention [170] The Convention was amended in 1978 and substantially revised in 1991 to give much greater protection for plant breeders' rights.[171] To meet the demand of developing countries, the concept of Farmers' Rights was adopted in a Resolution as an Annex to the Undertaking.[172] The rationale behind the concept is that whereas protection is given to improved plant varieties through the system of plant breeders' rights, the corresponding labour and effort of farmers in developing countries expended in selecting, planting and improving on particular crops or genetic resources before they are further developed by plant breeders in developed countries has not been acknowledged. Recognising such rights would mean that developing countries would receive a greater share of the

168 *Ibid* , Article 5.

169 See generally G Rose, *International Regimes for the Conservation and Control of Plant genetic Resources*, in M Bowman and C. Redgwell (eds), **International Law and the Conservation of Biological Diversity**, Kluwer Law International, London-the Hague-Boston, 1996, pp 145-169. Also J Esquinas-Alcazar, *The Global System on Plant Genetic Resources*, 2 **RECIEL** (1993) p 151.

170 *International Convention for the Protection of New Varieties of Plants (UPOV Convention)*, 2 December 1961, 33 UST 2703 Over nineteen countries have ratified UPOV, including the U S , Canada, Japan, New Zealand, Australia, South Africa, Israel and the major countries of Western Europe

171 See N Byrne, *Plant Breeding and the UPOV*, 2 **RECIEL** (1993) p 136 At the time of writing, the 1991 amendments are not yet in force. It has been argued however that as the 1991 amendments extend the term "breeders" to include not only those who have bred a plant but also those who have "discovered and developed it" and provide that widespread knowledge of a new variety is not a bar to a claim, these "could increase the opportunity for village farmers and indigenous peoples to claim plant breeders' rights in relation to landraces", see Rose, *supra*, note 169, pp.165-6 It remains to be seen that such interpretation will be given to the 1991 amendments when they are in force

172 Resolution C5/89, Report of the 24th Session of the FAO Conference, FAO Doc. C89/REP (1989), cited in Rose, *supra*, note 169, p 155. See also D. Cooper, *International Undertaking on Plant Genetic Resources*, 2 **RECIEL** (1993) p 158, at pp 163-4 The Resolution defined Farmers' Rights as "rights arising from the past, present and future contributions of farmers in conserving, improving and making available plant genetic resources, particularly those in the centres of origin/diversity" It further proposed that "farmers, especially those in developing countries, should benefit fully from the improved and increased use of the natural resources they have preserved"

benefits deriving from use of plant genetic resources. It is envisaged that the concept could be implemented through establishment of an International Fund on Plant Genetic Resources which would support plant genetic conservation and utilisation especially in developing countries Nevertheless to date there has been no progress in setting up the Fund and thus no concrete implementation of the Farmers' Rights concept [173] It is debatable, therefore, whether the Undertaking has succeeded in dealing effectively with the issue of access and thus whether it has worked to the benefit of developing countries In any case, it is a non-binding agreement and so has largely been ignored [174]

Under Article 15 (2), Parties are under an obligation to "create conditions to *facilitate access* to genetic resources for environmentally sound uses by other Contracting Parties and not to impose restrictions that run counter to the objectives of the Convention" (emphasis added). The extent of this obligation is by no means clear. It can be argued that it will have little legal effect on the provider states' rights over their genetic resources. Article 15 (5) provides further that "access to genetic resources must be subject to the "prior informed consent" (PIC) of the Contracting Party providing such resources, unless otherwise determined by that Party". It has been submitted that the wording "unless otherwise determined" suggests the PIC is to be considered the point of departure [175] Thus it is desirable that the Parties providing genetic resources should establish procedures requiring PIC. At the time of writing, Thailand has prepared a draft procedure regulating access to its genetic resources (see Appendix III of this

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[173] Rose, *ibid* , p 156

[174] A revised text of the Undertaking is expected to be considered by governments at the FAO Commission on Plant Genetic Resources (CPGR)'s 4th Technical Conference scheduled to be held in Leipzig, Germany in June 1996 The possibility of revising the Undertaking to become a Protocol under the CBD has also been suggested.

[175] F Hendrickx, V Koester and C Prip, *Convention on Biological Diversity, Access to Genetic Resources A Legal Analysis*, 23 EPL (1993) p 250, at pp 252-4 Some possible elements which might be included in a PIC procedure have been recommended For the provider countries, this should include a designated national authority to deal with applications for consent, types of resources covered by PIC procedure, and requirement for complete information on the specific materials to be collected, such as quantities, what the genetic resources will be used for and what benefits they would entail

thesis). Also the Party seeking access should provide the State whose genetic resources it seeks to access with sufficient information to allow it to consent to access on a PIC basis. However it is unclear what would be the situation if the Parties providing genetic resources have not enacted legislation requiring PIC. Furthermore, what will be the position concerning countries which have not ratified the Convention, especially the US One possibility is to declare a moratorium on such country having access to genetic resources without consent of the host country. Another obvious problem concerns the developing countries' ability and capacity to enforce their rights to control access since genetic resources can easily be smuggled out of their countries. In order to render the provisions on regulation of access effective, it is desirable that user countries should enact corresponding legislation, such as making imports of genetic materials which have not been obtained through a PIC procedure unlawful, obligating companies, laboratories and other users in their countries to keep records of their possessions of such resources and making compliance with PIC procedure in provider countries a precondition for granting a patent in the user countries [176] Reflecting the need for compromise, the language of Article 15 is deliberately vague, leaving much room for interpretation which can only be clarified by subsequent practices of the Parties.

Another highly controversial provision is Article 16 dealing with access to and transfer of technology Each Contracting Party undertakes to *"provide and/or facilitate access* for and transfer to other Contracting Parties of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment" (emphasis added).[177] Access to and transfer of such technology to developing countries must be provided or facilitated under "fair and most favourable terms" including on "concessional and

[176] *Ibid*, pp 254-255 These requirements can be very important in giving effect to the PIC provision since it has been observed that at the beginning of 1993, the US National Cancer Institute (NCI) was prospecting for drugs in 25 countries but had entered into formal agreements with only 4 of them although it is expected that the number of such agreements will increase substantially in the future, Rose, *supra*, note 169, p 164

[177] Article 16(1)

preferential terms where mutually agreed".[178] Parties must take legislative, administrative or policy measures, "as appropriate, with the aim" that countries providing genetic resources, especially developing countries, are provided with access to and transfer of such technology on "mutually agreed terms", and that the private sector "facilitates" access to joint development and transfer of such technology for the benefit of developing countries.[179] The Convention also provides that each Party must take legislative, administrative or policy measures, as appropriate, "with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilization of genetic resources" with the Party providing such resources upon "mutually agreed terms".[180] The language, again, is extremely vague throughout this part, leading to different interpretations concerning the extent of obligations imposed upon developed countries which fear that Article 16 may unduly force a transfer of technology to developing countries and require them to compel such transfer from their private sector. Such an interpretation was one of the main reasons for the USA's initial refusal to sign the Convention.[181] The obligation is seen by some commentators as considerable given that it might eventually affect the present status of intellectual property rights.[182] There is a general fear that erosion of intellectual

[178] Article 16(2)
[179] Article 16(3) and 16(4)
[180] Article 15(7)
[181] The United States eventually signed the Convention on 4 June, 1993, the last day that it was open for signature but see *the United States' Declaration made at the UNEP Conference for the Adoption of the Agreed Text of the Convention on Biological Diversity*, May 22, 1992, 31 ILM (1992) 848, which stated that the U S found "particularly unsatisfactory" the Convention's treatment of intellectual property rights, finances, including the role of the GEF, technology transfer, and biotechnology In other words, apart from its objection to the financial mechanism set up under the Convention, the US interprets the obligations to transfer and provide access to technology are interpreted as having the effect of coercing, rather than encouraging, transfer of technology from its private sector to developing countries outside the free market system, and of allowing developing countries to restrict intellectual property rights In regard to biotechnology, the U S is unhappy about provisions in Articles 8 and 9 respectively requiring Parties to control any "living modified organisms" so that they do not present a hazard to the environment or human health and calling for a protocol to set out the procedures for "the safe transfer, handling and use of" such organisms resulting from biotechnology The provisions are seen as regulating biotechnology products differently from other products or practices causing damage to the environment
[182] See for example, J Straus, *The Rio Biodiversity Convention and Intellectual Property*, 24 IIC (1993) p 602, at p 606.

property rights could have the effect of discouraging investment in research and development of innovative technology, especially biotechnology, and thus such States consider that terms of mutual access to genetic resources and technology between developed and developing countries respectively should be left to free market forces when negotiating access agreements.[183] The fact that the Convention acknowledges that access and transfer must be provided "on terms which recognize and are consistent with the adequate and effective protection of intellectual property"[184] does not reassure developed countries, such as the US. Article 19 further reinforces the technology transfer process by creating obligations, albeit non-committally, to provide for effective participation in biotechnological research by developing countries providing genetic resources for such research and that "where feasible" such research should take place in those countries. Developed countries must also take "practicable measures to promote and advance priority access on a *fair and equitable basis*" (emphasis added), as well as "on mutually agreed terms" by developing countries to the results and benefits arising from biotechnologies based upon genetic resources provided by those countries. It has been pointed out that the obligations in Article 19 are "soft", especially as the identification of material from which the benefits derive is difficult [185]

It is notable that, in addition to the vague language employed throughout the Convention, particularly in Articles 15 and 16, most obligations stipulated are to be based on "mutually agreed terms". This implies further negotiation among the parties Much will depend on the bargaining positions and the political will to reach agreement of both sides. Reluctance to implement these obligations may defeat the object and purposes of the Convention altogether

[183] K. A. Goldman, *Compensation for Use of Biological resources under the Convention on Biological Diversity · Compatibility of Conservation Measures and Competitiveness of the Biotechnology Industry*, 25 **Law & Policy in Int'l Business** (1994) p 695, Bell, *supra*, note 150, and D Hurlbut, *Fixing the Biodiversity Convention · Toward a Special Protocol for Related Intellectual Property*, 34 **NRJ** (1994) p 379.
[184] Article 16(2).
[185] F. Burhenne-Guilmin and S Casey-Lefkowitz, *The Convention on Biological Diversity A Hard Won Global Achievement*, 3 **YIEL** (1992) p 43, at p 54

Another contentious issue is the funding provisions of the Convention From the outset, negotiations were based on General Assembly Resolution 44/228,[186] which called for the provision of "*new and additional* financial resources for developing country nations and the identification or creation of a mechanism by which to provide the funding to developing nations" (emphasis added),[187] i.e. not merely resort to the GEF and other existing funds Articles 20 and 21 which provide for financial resources and financial mechanisms were negotiated in some considerable heat and under great time pressures at Rio. They contain language that was deliberately left to be clarified by the COP.[188] The developed countries must provide "new and additional financial resources" to enable developing countries to meet "the agreed full incremental costs"[189] to them of implementing measures. The COP is to establish policy, strategy, programme priorities, eligibility criteria relating to access to and utilisation of such resources and an indicative list of incremental costs.[190] They are likely to have a difficult task in resolving the conflict of interests

Similarly, the COP is to decide upon the institutional structure for the operations of the financial mechanism, "the amount of resources needed", taking into account the need for "predictability, adequacy and timely flow of funds", as well as the importance of

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186 GA Res 44/228 GAOR, 44th Sess , Supp No 49, UN Doc A/44/49 (1989), cited in Roberts, *infra*, note 187.

187 P Roberts, *International Funding for the Conservation of Biological Diversity · Convention on Biological Diversity*, 10 **Boston UILJ** (1992) p 303, at p 312

188 See the declarations made on signing the Convention by some developed States, including UK, as regards interpretation of these Articles, *infra*, note 204

189 It is not clear what "full incremental costs" means, and during the first session of the Intergovernmental Committee on the Convention, the Secretariat was requested to examine the methodologies to define the meaning of the term as well as to provide a draft indicative list of such incremental costs for discussion at the second session of the Committee, *Report of the Intergovernmental Committee on the Convention on Biological Diversity on the Work of Its First Session*, **UNEP/CBD/COP/1/3**, pp 12-3. At the second session, however, the question was not resolved and it was decided that the matter be addressed in the framework of the COP at its earliest convenience

190 Articles 20(2) and 21(1)

"burden-sharing among the contributing Parties.[191] The financial mechanism must operate within "a democratic and transparent system of governance".[192] The GEF[193] will act as the institutional structure on *an interim basis* for the period between the entry into force of the Convention and COP I or until the COP designates another institutional structure to perform this function.[194] The GEF has recently undergone restructuring and has now been transformed from an experimental programme into a permanent financial mechanism that will provide grants and concessional funds to developing countries for projects aimed at protecting the global environment.[195] According to the Instrument establishing the restructured GEF, the GEF will function *under the guidance of, and be accountable to* the COP which will decide on policies, programme priorities and eligibility criteria for the purposes of the Convention (emphasis added).[196] A new GEF Trust Fund is to be established with the World Bank

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191 *Ibid*

192 Article 21(2).

193 The Global Environment Facility (GEF) was created in 1990 to assist developing countries to address four main global environmental problems, namely, global warming, pollution of international waters, loss of biological diversity and the depletion of the stratospheric ozone layer. The GEF is operated jointly by the World Bank, UNDP and UNEP. It initiated a three-year pilot phase ending in June 1994. During its pilot phase, the GEF has been criticized for its internal structure, its choice of implementing agencies and the design of the project it funds.

194 Article 39. It is worth noting that some developing countries were not satisfied with the choice of the GEF to act as the financing institution on an interim basis for fear that it would eventually become the permanent mechanism for this purpose. See in particular, the reservations made by the Malaysian delegation on this point. *Report of the Intergovernmental Negotiating Committee for a Convention on Biological Diversity on the Work of Its Seventh Negotiating Session/Fifth Session of INC*, **UNEP Doc., UNEP/Bio.Div/N7-INC.5/4** (1992), cited in Roberts, *supra*, note 188, p 10.

195 See *Instrument for the Establishment of the Restructured Global Environment Facility*, 24 **EPL** (1994) p 192. See also, Mohamed El Ashry, *The New Global Environment Facility*, **Finance & Development**, June 1994, p 48.

196 *The Instrument* , *ibid* , para 6. It is worth noting that Article 21 (1) of the Convention provides that the financial mechanism will function *under the authority and guidance of and be accountable* to the COP (emphasis added). The phrase "under authority" has thus been omitted in the Instrument and this inconsistency with the Convention was noted during the second session of the Intergovernmental Committee, see remarks of the Committee's chairperson, **UNEP/CBD/COP/1/4**, p 40. It was also observed that such wording is inconsistent with Article 21 (2) of the Convention which gives power to the COP to make decisions "after consultation with the institutional structure". There was a general acceptance in the Committee that "under the authority" means the COP is the supreme body of the Convention. These ambiguities in the wording are probably part of the reason for developing countries' resistance during COP I to appointing the GEF as the permanent institutional structure managing the financial mechanism.

serving as the trustee [197] The GEF will comprise an Assembly,[198] the Council,[199] and a Secretariat At the COP I of the CBD held in Nassau, 28 November - 9 December 1994, due to opposition from some G77 countries, developed countries failed to get enough support to designate the GEF as the permanent institutional structure [200] COP I decided to adopt the policy, strategy, programme priorities and eligibility criteria for access to and utilisation of financial resources, but it was agreed that the restructured GEF will continue to serve as the institutional structure operating the financial mechanism under the Convention on *an interim basis* [201] UNEP is permanently to provide the Convention's Secretariat The same attempt to get support for the GEF failed again at COP II held from 6-17 November 1995 in Jakarta It was decided that the restructured GEF will continue to operate the financial mechanism under the CBD on *an interim basis* until the COP designates a permanent institutional structure for such purpose, a decision which the Parties will try to reach at COP 3 The first review of the effectiveness of the financial mechanism is to take place at COP 4 in 1997 [202] A significant development at COP 2 was the decision of the Parties to negotiate a Protocol on Biosafety The meeting of an Open-Ended Ad Hoc Working Group on Biosafety is to be held in Denmark from 22-26 July 1996 to consider the need for and the modalities of a Protocol for the safe transfer, handling and use of living modified organisms [203]

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[197] *supra*, note 196, para 8

[198] The Assembly comprises representatives of all participants and it will meet every three years

[199] The Council consists of 32 members representing constituency groupings, taking into account the need for a balanced and equitable representation of all countries, i e 16 from developing countries, 14 from developed countries, and 2 from the countries with economies in transition, see *supra*, note 196, para 15 The Council will meet at least twice a year and will be responsible for developing, adopting, and evaluating the operational policies and programmes for GEF's financial activities

[200] For criticism of the GEF during its pilot phase and its potential weaknesses under the restructured Instrument, see S K Mertens, *Towards Accountability in the Restructured Global Environment Facility*, 2 **RECIEL** (1993) p 105

[201] See **UNEP/CBD/COP/1/CW/L.10/REV.1**, and Annex I for policy, strategy, programme priorities, and eligibility criteria for access to and utilization of financial resources For a summary of the results of COP I, see 25 **EPL** (1995) p 38

[202] See **The Biodiversity Coalition**, Newsletter No 12, February 1996, p 3

[203] *Ibid* , p 11

The concern of developed countries over their commitment to provide financial resources can be seen from the common declaration made by 19 countries on adoption of the agreed text of the Convention in Nairobi. They stated their understanding that the reference to decisions to be taken by the COP under Article 21 (1) relates to the "amount of resources needed" by the financial mechanism, not to the extent or nature and form of the contributions of the Contracting Parties.[204] Understandably, they do not wish such issues to be decided by the COP, the majority of which consists of developing countries The eventual amount of financial resources required will, therefore, remain largely at their discretion and undoubtedly this will have a significant effect on the success of the Convention. This is particularly so since it is not clear either whether an adequate contribution to financial resources from developed countries would be made a precondition to the developing countries' commitments to implement the Convention.[205] Some writers interpret this provision as meaning that in effect developing State parties need only implement their conservation and sustainable use obligations under the Convention to the extent that the developed country parties meet their commitments in relation to provision of financial resources and transfer of technology.[206] Certainly, during the negotiation of the CBD, some developing countries expressed clearly their view that the effectiveness of the Convention depends on access to financial support from the international community.[207] At one session of

[204] The Declaration was made by Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Italy, Japan, Malta, Netherlands, New Zealand, Portugal, Spain, Switzerland, the United Kingdom and the United States of America

[205] In this respect, Article 20 (4) is ambiguous It provides that " the extent to which developing country Parties will effectively implement their commitments under this Convention will depend on the *effective* implementation by developed country Parties of their commitments under this Convention related to financial resources and transfer of technology and will take fully into account the fact that economic and social development and eradication of poverty are the first and overriding priorities of the developing country Parties" (emphasis added)

[206] Burhenne-Guilmin and Casey-Lefkowitz, *supra*, note 185, p 56 See also C de Klemm and C. Shine, **Biological Diversity Conservation and the Law**, IUCN, 1993, p.23, who suggest that Article 21 can be interpreted as meaning that, without the provision of financial resources, "developing countries are considered by the Convention as no longer bound by their conservation obligations"

[207] See *Report of the Ad Hoc Working Group of Legal and Technical Experts on Biological Diversity on the Work of Its First Session*, **UNEP Doc. UNEP/Bio.Div/WG.2/1/4Add.1** (1991), cited in Roberts, *supra*, note 187, pp 313-314

the *ad hoc* working group of legal and technical experts on biological diversity, the delegation from Thailand was reported as stating that the Convention would not be obligatory without the provision of financial resources to developing countries as the cost of implementing biological diversity preservation activities far exceeds the financial resources currently available for developing countries [208] The crucial question is "how much" resources Article 21 implies It is unlikely that there will be no transfer of financial resources from developed countries, but it is equally unlikely that developing countries can succeed in unlimited demands to resolve their poverty problems. Some compromise will have to be reached, or non-implementation of the Convention will result to the detriments to all sides

It is clear that one of the principal objectives of the CBD is to allow host countries of genetic resources to recapture some of the full value of the resources which are subsequently developed into new crops or new products and thereby providing them with an incentive to engage in conservation efforts However at this point in time, the economic returns that they expect through the proper implementation of the CBD are still highly speculative. Undoubtedly these will depend to a large extent on the knowledge of the potential commercial values of their genetic resources through research and development, an expertise which most developing countries still lack. There is also concern in some countries such as Thailand that indigenous knowledge relating to the medicinal properties of certain genetic resources may be taken free of charge by foreign entities if access to the resources is widely opened All these perceived weaknesses plus the likely problems of enforcing access agreements effectively in order to prevent smuggling, raise the serious question of whether developing countries will benefit much from biodiversity prospecting in the end

Amidst all these uncertainties, a number of proposals have been advanced to adjust some

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[208] Roberts, *ibid* , at p 313

aspects of the intellectual property rights regime in order to facilitate the conservation of biodiversity. It has been proposed that the concept of plant breeders' rights should be extended to discovered plants so as to provide a legal framework for compensating developing countries for the use of their native germplasm and induce governmental action in such countries to conserve indigenous plant species.[209] By declaring such plant genetic resources to be the property of the States in which they are discovered, countries with raw genetic material might then be in a position to negotiate scientific assistance, technology transfer and training of native breeders with private industry or developed countries. They could then sell the exploration rights to the highest bidder or license several and collect royalties. The prospect of receiving benefits from commercially valuable natural plant species would give developing countries the economic incentive to conserve their natural germplasm.[210] In addition, it has been argued that the Rio Convention, by referring to "sovereign rights", requires that less developed countries (LDCs) be accorded intellectual property rights in pharmaceutically useful chemicals derived from their biodiversity resources.[211] It has been pointed out that, without patent protection, LDCs are left in a weak bargaining position with transnational corporations and, as a result, the LDCs' natural resources, together with the indigenous knowledge of the structure of the drug are undervalued.[212] Despite these proposals to adapt the intellectual property rights regime to enable developing countries to gain more from use of their raw genetic resources, it is far from clear how these can fit into the existing system of intellectual property laws. Creation of a *sui generis* "intellectual property-style" right in the discovery of wild genetic resources has been suggested as a possible measure but such a regime would inevitably encounter "a range of legal, policy and practical questions" which are not easy to resolve.[213] Such questions

[209] R L Margulies, *Protecting Biodiversity : Recognizing Intellectual Property Rights in Plant Genetic Resources*, 14 **Mich. JIL** (1993) p 322, at p 345

[210] *Ibid*, at pp 350-51

[211] S Kadidal, *Plants, Poverty, and Pharmaceutical Patents*, 103 **Yale LJ** (1993) p 223, at p 225.

[212] *Ibid*, at pp 232-34

[213] I Walden, *Intellectual Property Rights and Biodiversity*, in Bowman and Redgwell, *supra*, note 169, pp 171-189, at pp 185-188 See also I Walden, *Intellectual Property in Genetic*

include those concerning whether the property right would accrue exclusively to the country where the resource was originally discovered, and whether, if so, other countries which also possess that resource would have little incentive to conserve their resources.[214] On the other hand, a system of "multiple rights" would make the costs of acquiring the resources prohibitive and competing claims to the rights would drive prices down to a level lower than other opportunity costs in the use of those resources.[215] Even if a prospecting company is required to pay only the country from which a germplasm has been acquired, means would have to be found to ascertain the origin of that resource [216] These, plus the question concerning the scope of the property right to be conferred, e.g. whether it is to be attached to "uses" of the material or the material itself, will probably make the establishment of a *sui generis* property right of developing countries over their genetic resources infeasible at least in the near future.

A few commentators have advocated conclusion of agreements on the lines of the type arrived at between Merck & Co., Inc , a US company, and the National Institute of Biodiversity (INBio) of Costa Rica in which this private company acknowledged its obligation to compensate a country which provided genetic resources for the use of its genetic material.[217] The profits from royalties, as in the case of the Merck-INBio agreement, could be earmarked for the conservation of biodiversity [218] It has been

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Sequences, 2 **RECIEL** (1993) p 126, at pp 130-132

214 *Ibid*

215 *Ibid*

216 *Ibid*

217 See *Deal Between Drug Firm Costa Rica Called Example of What Treaty Would Do*, 15 **Int'l Envtl. Rep. (BNA)**, June 17, 1992, p 398 An agreement between Merck and INBio was concluded in September, 1991 Under it, INBio undertook to conduct a programme in Costa Rica to provide Merck with plant, insect and environmental samples as well as the opportunity to evaluate these samples for pharmaceutical and agricultural applications In return for the samples, Merck will provide INBio with US$1 million in research funding over a two year period as well as start-up expenses The important part of the agreement is that, in addition to the initial payment, Merck was to pay INBio royalties on the sale of any products that Merck may ultimately develop from a sample provided by INBio.

218 C Joyce, *Prospectors for Tropical Medicines*, 132 **New Scientist**, October 19, 1991, p 36, cites the case of Costa Rica which signed an agreement with Merck. Income from prospecting is expected to be used to support the country's large conservation programme See also *Costa Rica takes control of its biological assets*, 132 **New Scientists**, 19 October 1991, p 38

suggested that an international clearing house should be created to match private companies and scientists in developed countries with governmental and non-governmental conservation organizations in developing countries[219]. The conditions for the undertaking of such an economic enterprise would have to determined on a basis that would contribute to the conservation of biological diversity.[220]

At present, it is difficult to determine whether the CBD will have any significant impact on the conservation of biodiversity in the near future. Too many issues remain unresolved and the required sacrifice of positions held on both sides has not been forthcoming. Some developing countries, however, have in the negotiating process become more aware of the need to guard against unauthorized access to their genetic resources.[221] The probable trend is that more developing countries will enact legislation to regulate such access. Whether they can enforce their laws to prevent their genetic resources from being smuggled out is another matter, however. The Merck-INBio agreement has often been cited as a welcome development which offers great potential in creating a flow of the necessary financial resources from the North to the South. But many developing countries may not be in a strong bargaining position. Neither may the financial resources deriving from this source be enough to ensure effective implementation of conservation measures. Apart from the problem that private companies might poach genetic resources, there is also a danger that, despite the conclusion of an access agreement, companies which discover a commercial use for specimens from the contracting state might not disclose that information and might attribute those discoveries to other substances.

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219 Roberts, *supra*, note 187, at p 342.

220 *Ibid*.

221 On June 6, 1992, the Presidents of Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama signed a non-binding agreement of intent to coordinate their legislation regulating the use of genetic resources found in Central America. See *Central American Presidents Resolve to Pass Laws Restricting Use of Resources*, **Int'l Envl. Rep. (BNA)**, June 17, 1992, p 397.

As long as the CBD remains, as it now is, largely a framework Convention, with much still left to be further developed in term of implementation, the other existing treaties, despite their *ad hoc* and piecemeal character, will retain a significant role in the preservation of biodiversity. Therefore, it is important to continue working on improving the ratification and implementation of these conventions by identifying gaps and obstacles relevant to their effective implementation

CHAPTER 4

ENVIRONMENTAL PROTECTION IN THAILAND

1. Introduction

The purpose of this Chapter will be to provide an overview and a background to the problems of environmental protection in Thailand. It is, therefore, necessary first to provide some basic information concerning the environmental problems being encountered by Thailand, including its relevant policies and institutional framework, though emphasis will be on the existing legal framework. The extent to which the principles and approaches of sustainable development identified in Chapter 1 have been or can be incorporated into its relevant legal provisions will be considered. Problems and gaps in its laws as well as obstacles relating to the implementation of environmental legislation in Thailand will be examined. Although there are at least four areas which are generally considered to be of critical environmental concern in Thailand, namely air and water quality, management of hazardous waste and conservation of biological diversity, this Chapter will be limited to environmental management of air quality and conservation of biodiversity

Discussion of environmental protection in Thailand is divided into three chapters This Chapter presents a country profile and covers environmental problems concerning air quality and the conservation of biodiversity including the policy and institutional framework already in place for tackling those environmental problems; Chapters 5 and 6 examine the legal framework provided by the existing environmental legislation for atmospheric protection and conservation of biodiversity respectively.

2. Country Profile and Background Information on Environmental Problems

Thailand is situated on the Indo-China peninsula and has a total land area of about 513,000 square kilometres. It is bordered by the Union of Myanmar, the Lao People's Democratic Republic, Cambodia and Malaysia. Approximately 46 percent of the

country's land area is under agricultural use while another 28 percent is under forest cover; urban areas account for less than 4 percent.[1] According to a study by the National Economic and Social Development Board (NESDB) published in March 1995, the current population is 59 4 million.[2] As a result of an intensive family planning campaign, the population growth rate, which had averaged 3 percent per year between 1960 and 1970, had declined to 2.1 percent by 1990. This growth rate is expected to drop further to 1.9 percent by the year 2005 when the total population is expected to reach 65 million.[3]

The agricultural sector, the main driving force behind the Thai economy before the 1970's, was replaced by the manufacturing sector in the 1980's, and in 1991, the latter accounted for more than three-quarters of Thailand's export earnings[4] From 1987, Thailand attained double-digit real growth rates for three consecutive years and has emerged as one of the world's fastest growing economies. Although economic growth has slowed down since 1990, it is expected to remain above 7 percent throughout the 1990's.[5] Due to the Government's policy of promoting exports, export-oriented industries, such as electronic goods, textiles, jewellery, leather and leather products, plastic products, rubber products and toys have steadily increased their share of total production during the second half of the 1980's whereas the share of the food-processing, beverage, tobacco, wood and wood products and basic metal industries

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[1] **Thailand National Report to the United Nations Conference on Environment and Development (UNCED)**, June 1992 It should be pointed out, however, that the figures on agricultural land use may not be accurate as some lands left idle are reported as used for agriculture to avoid higher taxes charged on idle land, See B Mekvichai et al , **Urbanization and Environment : Managing the Conflict**, Thailand Development Research Institute (TDRI), 1990, p 43

[2] NESDB, **Population Projections for Thailand 1990-2020**, March 1995, p 17

[3] *Ibid* , p 18

[4] M Santikarn Kaosa-ard, *Environment and Development · the Thai Experience*, **TDRI Quarterly Review**, Vol 8, No 4, December 1993, p 13

[5] *Ibid* See also **Siam Post**, 20 December 1995, p 17 where the NESDB was reported to estimate Thailand's economic growth to have been 8 6% in 1995 and will slow down to be 8 5 % in 1996

continued to decline [6]

With the substitution of an industrial economy for the previous agricultural economy, Thailand is encountering various environmental problems resulting from industrial and urban development. The population growth and increased economic opportunities in the urban areas have led to massive migration from the farming sector to the industrial and service sectors in major cities such as the Bangkok Metropolitan Area (BMA), Nakon Ratchasima and Chiang Mai. It has been projected that within the next fifteen to twenty-five years, about half of the total population will reside in urban areas.[7] Although the rate of urbanization in Thailand is low compared to other countries,[8] it takes place without proper planning or an adequate infrastructure to support it Uncontrolled patterns of development and poor road networks increase the distance of travel from residential locations to work. Lack of a proper mass transit system encourages the use of cars as the normal mode of travel, thus intensifying energy demand as well as promoting an inefficient use of energy.[9] Problems such as traffic congestion, water shortages, solid waste disposal, air, water and noise pollution are typical of major urban areas The problems are especially acute in the BMA which is the country's centre for commercial, industrial and administrative activities [10] The Bangkok Metropolitan Region (BMR)[11] accommodates over 70 percent of the whole

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[6] P. Kritiporn, T. Panayotou and K. Charnprateep, **The Greening of Thai Industry : Producing More and Polluting Less**, TDRI, 1990, pp 8-11

[7] B. Mekvichai et al , *supra*, note 1, pp 3, 86, where it is forecast that population in the BMR will grow almost 80 percent faster than the nationwide average during the 1986-2001 period

[8] *Ibid* , pp 88-9 where it is stated that Thailand's overall rate of urbanization is lower than that of other Asian and Latin American countries

[9] It is estimated that the number of cars in the BMA increased from 600,000 to 2 3 million from 1980 to 1990, a four times increase within a decade, see S Vivajanasirin, *Policies to Improve Environmental Quality*, unpublished paper, 25 January 1994, p 5, on file with the writer

[10] *Ibid* , p 10 The area of BMA covers about 1,560 square kilometres. Its population was estimated to be between 5.7 - 7.5 million which accounts for 11 - 14 percent of the country's total population, and is 27 to 36 times larger than Nakon Ratchasima which is Thailand's second most populous city

[11] This term signifies an area of BMA plus another five small provinces at the outskirts of the BMA which have grown as industrial areas as a result of their proximity to Bangkok or the BMA

nation's factories (most of which, with the exception of paper products and printing, are export-oriented).[12]

The growth of the industrial sector can be further illustrated by the number of factories registered with the Department of Industrial Works (DIW) of the Ministry of Industry (MOI). In 1969, there were about 600 factories registered. By 1989, the number had risen to 51,500 factories, more than 50 percent of which are located in the BMR [13] About 26,235 of the registered factories are classified as polluting industries.[14] These figures include factories sited in 23 industrial estates, 12 of which are in the BMR. It is worth noting that, although factories within industrial estates have to register with the DIW, the power to supervise their operation, as well as control over their pollution discharges, rests with the Industrial Estate Authority of Thailand (IEAT).[15] Although all industrial estates provide some kind of central waste water treatment, it is not clear how effective the IEAT has been in enforcing environmental measures against factories under its supervision, especially requirements for treatment of hazardous waste and control of air emissions. There has been criticism that the IEAT lacks systematic administration for effective pollution control and that there have been incidents of illegal dumping of hazardous waste on public land outside an industrial estate in Lumpoon situated in Northern Thailand [16]

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[12] Mekvichai et al , *supra*, note 1, p 71. They are factories producing textiles, garments, leather goods and footwear, paper products and printing, rubber and plastic products, chemical products, basic metals, fabricated products and electrical machinery

[13] P Kritiporn et al , *supra*, note 6, p 43 Figures from a different source reveal the same number of registered factories in 1969 but the number of factories in 1986 was 85,480 (presumably including those unregistered) and this has risen to 102,723 in 1991, about 20% of which are located in the BMA, see P. Rienvattana, *Industry and Sustainable Development*, paper presented at the Conference on "Chemistry and Sustainable Environment", Bangkok, 21-23 December 1995, p 6, citing statistics from the Thai Farmers Bank in 1992

[14] Kritiporn, *ibid* , p 13

[15] The IEAT was first established by a Revolutionary Decree in 1972 in order to organize industrial estates which would provide land and infrastructure to service industries The IEAT's power has been further endorsed by the 1979 IEAT Act which enables the IEAT to reclaim land for purposes of setting up an industrial estate and to oversee private industrial estates In addition, investment incentives are also provided by the Board of Investment to industries located within industrial estates

[16] Interview conducted by the writer with an expert official in the Department of Pollution

Despite its impressive economic growth rate and the fact that Thailand is often said to be on the way to becoming one of the newly industrialized countries (NICs), it is hard to see how the growth in economic wealth has benefited the majority of its people, most of whom still live in poverty in the rural areas. Indeed, the rapid structural shift towards an industrialized economy is not reflected in the employment and population structure [17] In 1961, 77 percent of the population was in the agricultural sector, By 1989, despite the period of accelerated industrialization, over 60 percent of the population was still engaged in agriculture [18] The fact that the average per capita income of the population engaged in the non-agricultural sector is nine times higher than that of those engaged in the agricultural sector clearly indicates the extent of the income gap between the two sectors. The problems of appropriate income distribution can be seen from symptoms such as the bankrupting of rural society as a result of permanently falling prices of agricultural produce, which results in migration to off-farm employment in cities and prostitution, all of which exacerbate both developmental and environmental problems

Associated with poverty is the problem of deforestation In 1960, approximately 198 million rai (31 68 million hectares),[19] i e. 62 percent of the country's land area was under forest cover. In the last four decades, this area has been reduced to 90 million rai (14 4 million hectares), i e only about 28 percent of the State's total area [20] Loss of forest cover, especially on steep slopes and in watersheds, leads to increased runoff, soil erosion and loss of water control. The downstream environmental impacts include flooding, sedimentation of water bodies and decreased availability of water during the

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Control in the Ministry of Science, Technology and the Environment, Bangkok, 25 August, 1994

17 T Panayotou and C Parasuk, **Land and Forest : Projecting Demand and Managing Encroachment**, TDRI, 1990, p 13

18 *Ibid*

19 The Rai is a Thai unit for measurement of a land area One hectare is approximately equivalent to 6 25 rai

20 Royal Forest Department Statistics, cited in Panayotou and Parasuk, *op cit*, *note 17*, p 5

dry season.[21] In addition, it is generally accepted that deforestation is a major cause of loss of biodiversity. Deforestation is also said to be a significant cause of Thailand's emission of CO_2, a predominant greenhouse gas contributing to global warming.[22] It is estimated that in 1989, CO_2 release through deforestation was 55 million tons or 15 million tons of carbon.[23] As far as the causes of deforestation are concerned, it has been observed that "poverty and deforestation are locked in a vicious circle of mutual reinforcement".[24] A study of the causes of deforestation in several provinces in the Northeast of Thailand found that in response to falling agricultural income, landless and small-scale farmers increased their dependence on forest products and sought more productive land in the nearby forests. As the fertility of the land declined, farmers were forced to move deeper into the forests for new land. Thus, it has been concluded that the "unsustainability of farming on fragile, marginal land without adequate investment in soil and water conservation and without use of fertilisers ensures the perpetuation of both poverty and deforestation".[25]

In 1985, a National Forest Policy was introduced to increase the areas of forest cover from 28 percent to 40 percent; 15 percent for conserved forests and 25 percent for economic forests.[26] However, according to the most recent change of policy, the

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21 D. Phantumvanit and T Panayotou, **Natural Resources for a Sustainable Future : Spreading the Benefits**, TDRI, 1990, pp 15-19.

22 TDRI and TEI, **Preparation of a National Strategy on Global Climate Change**, 1993 (hereinafter **Strategy on Climate Change**), p v and pp 3-97 - 3-98

23 *Ibid*

24 Phantumvanit and Panayotou, *op cit*, note 21, p 27.

25 *Ibid*, p 28 See also L Lohmann, *Who Defends Biological Diversity ? Conservation Strategies and the Case of Thailand*, 21 **The Ecologist**, January/ February 1991, pp 5-13, where the author argues that business interests in logging and planting eucalyptus, state bureaucracy supporting misguided policies and illegal activities, and military involvement in illegal logging schemes, plantation operations and timber deals with military dictatorship in Burma have been mainly responsible for deforestation and the loss of biodiversity in Thailand

26 The term "conserved forest" signifies an area of natural forest to be protected, while "economic forest" refers to areas of forest reserves (so designated according to official classification even though some of these areas have already been cleared and occupied by village settlers) which can be used for commercial plantation of fast-growing trees as part of the reforestation programme to meet the target of raising areas under forest cover to 40 percent Recognizing the difficulty of achieving this target on its own, the Royal Forest Department (RFD) has encouraged the participation of the private sector in reforestation scheme through

proportions between conserved forests and economic forests have been reversed. The target for conserved forest areas is now 25 percent and for economic forest areas 15 percent.[27] Another important new policy is the Government's recognition of the existence of settlers in areas originally classified as forest reserves and its settling, therefore, of a target of 4 million rai (640,000 hectares) for land reform each year.[28]

In short, Thailand has moved from being an agricultural country to become an increasingly industrialized country, the main features of which are the expansion of industrial development and increasing urbanization. With the benefits that economic growth brings, there are also increasing environmental problems which, if not properly managed and regulated, can stifle the well-being and the quality of life of its people or even economic growth itself. Apart from the problems of environmental degradation resulting from industrialization and urbanization, deforestation is a complex issue which requires careful management because of its serious implications for the global environment, both in relation to atmospheric protection and to the conservation of biodiversity.

3. Air Pollution

3.1 General Background

Most of the air pollutants in Thailand come from the combustion of oil and coal in the transportation, power generation and industrial sectors. In 1990, Thailand's primary commercial energy demand was 29,750 KTOE (kilo ton of crude oil equivalent).[29]

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various incentive measures including leasing land to be replanted at relatively low prices Among the tree species recommended by Thai forestry experts is the controversial fast-growing eucalyptus. For details and evaluation of commercial forestry, see S. Tongpan et al, **Deforestation and Poverty : Can Commercial and Social Forestry Break the Vicious Circle ?**, TDRI, 1990

[27] NESDB, The Seventh Plan, Chapter 4, *Administration and Management of Natural Resources*, p 231.

[28] *Ibid*

[29] Data from the National Energy Policy Office (NEPO), cited in T Chongpeerapien et al, **Energy and Environment : Choosing the Right Mix**, TDRI, 1990, pp 6 and 11.

Approximately 40 percent of the demand was met by domestic supply in the form of natural gas, lignite, crude oil, hydroelectricity and condensate.[30] Of the energy imported, 98 percent was in the form of petroleum consisting of crude oil and oil products. The rest consisted of imported coal from Malaysia and a small amount of electricity from Laos.[31] Domestic sources of hydroelectric power currently supplying about 4,000 Gwh per annum are unlikely to increase on a substantial scale due to the controversy surrounding construction of gigantic dams.[32]

Petroleum is and will be the dominant fuel for energy consumption in Thailand It is projected that the share of petroleum in primary energy demand will decrease from 66 7 percent in 1991 to 63 percent by 2001 whereas the share of lignite and coal will increase from 13 percent to 28 percent over the same period.[33] As far as the final energy demand from 1991 to 2011 is concerned, the share of petroleum will rise from 59 percent to 66 percent, and of electricity from 10 to 19.5 percent whereas the use of lignite, coal and natural gas will remain relatively small.[34] Overall, fossil energy consumption is increasing at a faster rate than population growth Using 1990 as a base year, fossil energy consumption increased by 11.5 percent while the population growth rate in the same year was 1 43 percent, i.e. on a per capita basis, fossil energy consumption increased by 10 1 percent [35] The clear picture which emerges, therefore, is that the country will become increasingly dependent on high-carbon and high-sulphur fuels such as petroleum and lignite. This also means that, unless appropriate measures are taken for pollution control, problems of air pollution and acid rain are likely to be exacerbated,

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30 Chongpeerapien, *ibid*
31 *Ibid*
32 Projects for construction of dams have consistently been met with popular resistance For instance, in 1988 protesters succeeded in making the Government suspend the Nam Choan Dam Project in Western Thailand, and in July 1990, strong local opposition led to the Cabinet's retracting its decision to approve the Kaeng Krung Dam in a primary forest in the South of Thailand
33 Chongpeerapien, *op cit* note 29, p 9
34 *Ibid*
35 **Strategy on Climate Change**, *supra*, note 22, p 3-3

as has happened in many developed countries.

As in other countries, the major pollutants -and, therefore, those most requiring management and regulation are sulphur dioxide (SO_2), carbon dioxide (CO_2), carbon monoxide (CO), nitrogen oxides (NO_x), and suspended particulate matter (SPM) [36] Apart from these conventional pollutants, there are also other trace air pollutants, such as metals (e g arsenic, cadmium, lead and mercury), toxic fibres and organic compounds (including hydrocarbons). The power generation sector is the major emitter of SO_2, contributing about 56 4 percent in 1991. This is expected to rise to 62.9 and 70 9 percent in 1996 and 2001 respectively,[37] especially if greater use is made of lignite and coal in the generation of electricity. The transportation sector contributes most to the emission of NO_x, estimated as 63.9 percent in 1991 and projected to be 66.7 and 64 4 percent in 1996 and 2001 respectively.[38] As far as the emission of CO_2 is concerned, in 1991 the transportation sector contributed most (31.7 percent), followed by the power generation sector (25 9 percent) and industry (22.7 percent).[39] It is projected that in 1996, the emissions will increase to 33.7, 28.4 and 22.3 percent respectively [40] In 2001, the transportation sector is expected to be overtaken by the power generation sector in terms of CO_2 emissions, the latter counting as 34.2 and the former as 33 4 percent respectively Apart from the emission of CO_2 and NO_x, lead, CO, ambient acid aerosols, SPM and products of incomplete combustion from diesel and two-stroke motorcycle engines are also viewed as primary pollutants from the transportation sector.[41] Industry will maintain its contribution to CO_2 emissions at around 20 percent.[42] Although the industrial sector contributes fewer emissions when compared to the electricity generation and transportation sectors, it is the sector mainly responsible

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[36] See Chapter 2
[37] Kritiporn, *supra*, note 6, p 17, see Figure 2 2 from which the percentage is derived from
[38] *Ibid* , p 18, see Figure 2 3 where the percentage is derived from
[39] *Ibid* , p 19, see Figure 2 4 where the percentage is derived from
[40] *Ibid*
[41] Chongpeerapien, **Energy and Environment**, *supra*, note 29, p.41
[42] *Ibid*

for the emission of SPM, contributing 56 6 percent of total emissions in 1991, with a projected increase to 60 6 and 61.7 percent in 1996 and 2001 respectively [43]

In addition to both increasing energy demand and increasing use of fossil fuel, another worrying trend in relation to environmental protection is the likelihood that the power generation and industrial sectors will convert to use of lignite and coal as their major source of energy supply For the past several years, electricity demand by all sectors has increased two to three fold.[44] This mounting demand means that much more energy will need to be produced by the power generation sector. Since the Government's policy is to encourage more use of domestic sources of energy supply, the tendency will be to consume more and more of the country's lignite reserves.[45] The low price of lignite is attractive to industry, much of which is converting its boilers to use of lignite.[46] Despite their low price advantage, it is generally accepted that lignite and coal are the "dirtiest" type of fuel from the environmental viewpoint. The increased consumption of lignite both in the power generation and industrial sectors will have serious implications for levels of air pollution in the future.

3.2 Ozone Depleting Substances (ODSs)

Thailand is a Party to the Montreal Protocol on Substances that Deplete the Ozone Layer and has also adopted the London Amendments to the Protocol.[47] In February, 1992, a National Committee on the Implementation of the Montreal Protocol was established, consisting of, *inter alia*, representatives from the NESDB, the MOI, the Ministry of Science, Technology and Environment (MOSTE), the Board of Investment (BOI), the Ministry of Foreign Affairs and the Ministry of Commerce. According to the figures

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[43] *Ibid* , p 20, see Figure 2 5 where the percentage is derived from
[44] **Strategy on Climate Change**, *supra*, note 22, p 3-21.
[45] *Ibid*
[46] Kritiporn, *supra*, note 6, p 21 and p 27, Based on the energy demand in the industrial sector by energy sources from 1991 to 2011, it is estimated that the growth in lignite consumption will average 10 percent per year
[47] Thailand ratified the Montreal Protocol on 7 July 1989, and the London Amendments on 25 June 1992

given in 1991, the country's per capita consumption of CFCs and halons (Annex A substances) was 0.16 kg, while the figure for 1,1,1-trichloroetane and carbon tetrachloride (Annex B substances) was 0 02 kg per person.[48] Therefore, the quantities of ozone depleting substances (ODSs) consumed in Thailand are at present within the limits prescribed by the Protocol as those qualifying a State as an Article 5 Party.[49] However, consumption of ODSs in Thailand is rising rapidly due to its industrial growth, especially in export industries.

Thailand does not produce ODSs and so the demand is met largely by imports of the substances from Western countries.[50] In 1991 CFC-11, CFC-12 and CFC-113 were imported by around three dozen companies, less than ten of which account for more than 80 percent of the market [51] The most widely used ODS in Thailand is CFC-113 which is used primarily as a cleaning solvent in the manufacture of printed circuit boards and as a degreasing agent for metal parts and precision components.[52] Most of the consumption is by foreign companies or their subsidiaries producing these for the export market.[53] The second most widely used ODS is CFC-12 which is used as an agent in refrigeration and air conditioning equipment. Imports in 1991 rose by 30 percent over

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48 ICF Incorporated, SIAMTEC International, Ltd , and TDRI, **Country Study : Phaseout of Ozone Depleting Substances in Thailand**, September 10, 1992, p 2-3, (hereinafter **Phaseout of ODS in Thailand**)

49 According to the Protocol, developing countries with a per capita consumption of ODS below 0 3 kg (for Annex A substances) and 0.2 kg (for Annex B substances) will be allowed a 10-year grace period to comply with the Protocol and will be eligible to request assistance from the Multilateral Fund

50 The majority of CFC and halon imports come from Western Europe, especially Germany, France, Italy and the United Kingdom Smaller Quantities of CFCs are imported from the U S , Japan, Mexico, Singapore and Greece; see **Phaseout of ODS in Thailand**, *supra*, note 48, p 2-1

51 *Ibid.*, p.2-2

52 *Ibid* , p 2-3 Imports of CFC-113 in 1991 were 13 percent greater than in 1990, and 220 percent greater than those in 1986 See also *Thailand Imports More Ozone-Depleting Substances*, **Deutsche Presse-Agentur**, 4 March 1995, available in Lexis, citing an official figure from Thailand that Thailand's imports of ODSs shot up 10% in 1994 to a total of 13,000 tons despite a programme to phase-out the use of ODSs in air-conditioners, refrigerators, deodorant sprays and halons for fire extinguishers

53 *Ibid*

the 1990 figures.[54] This is largely due to the growth in demand for installation of air conditioners in cars, and for refrigerators and freezers.[55] Other important ODSs include CFC-11 used for blowing insulating foams; 1,1,1-trichloroethane used in solvent cleaning; halon 1211 and halon 1301 used in fire extinguishers; and small quantities of CFC-114, CFC-115 and carbon tetrachloride used in refrigeration, solvent cleaning, aerosols and foam industries.[56] In summary, the quantities of ODSs used in Thailand ranked according to their applications, are used primarily for solvent cleaning, followed by air conditioning, foam blowing and refrigeration.[57] If no action is taken to reduce ODS consumption, Thailand will exceed the Protocol's limit of 0.3 kg per capita for Annex A substances by 2002.[58] The consequent incremental costs involved in complying with the Montreal Protocol are estimated to be 7,000 million baht (US$ 280 million), most of which are attributed to phasing out ODSs in the refrigeration and air-conditioning sectors.[59] The Government has set the year 2008, two years before the scheduled date of the complete phase-out, as a target date for a complete phasing out of ODSs in Thailand. By 1994, 335 million baht (US$ 13.4 million) had been received by Thailand from the Multilateral Fund for phasing-out programmes.[60]

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[54] *Ibid*

[55] *Ibid* However, according to a later report, Thailand is having success in reducing the use of ODSs in aerosols, foam products and refrigerators by replacing CFCs with cheaper substitutes Nevertheless, the use of HFC 134A as substitute for CFCs in air-conditioners of old cars is not possible without adapting its system with a cost (around 3,000 baht). Also the price of refilling an air-conditioner compressor using HFC 134A is between 500-800 baht compared to 100-120 baht for the conventional type, see *Gains Made in Drive to Reduce Output of Ozone-Depleting Gases*, **Bangkok Post**, 17 September 1995, available in Lexis

[56] *Ibid*

[57] *Ibid.*

[58] *Ibid* , p 3-4

[59] M. Kaosa-ard and P P Eamsakulrat, *Trade VS Environment : From GATT to the World Trade Organization*, TDRI Working Paper, 1995, p.13.

[60] **Hazardous Substances News**, Pollution Control Department, Vols 2-3, Bangkok, May-December 1994, p 29 According to Kaosa-ard, *op cit* , note 59, the Thai government has allocated 10 million baht (US$ 0 4 million) to setting up a governmental unit to supervise the reduction and phasing out of ODS use in Thailand. Another 270 million baht (US$ 10 8 million) have been allocated as financial assistance to 12 factories in support of their ODS use phasing out programme amounting to a reduction of 1,000 tons ODSs used These factories consist of those involved in production of refrigerators, electronic circuits and high precision metal parts

3.3 Greenhouse Gases (GHGs)

According to a study carried out jointly by the Thailand Development Research Institute (TDRI) and the Thailand Environment Institute,[61] Thailand's emission of GHGs is still small at present accounting for less than 1 percent of global emissions, a figure much lower than the estimates previously made by the WRI.[62] However, if energy consumption continues to grow at the present rates, the level of GHGs emitted will rise significantly.[63] If no measures are taken to stabilise or reduce emissions, Thailand has the potential to more than double its CO_2 emissions by the year 2000 and triple it by the year 2006.[64] Currently fossil fuel makes up more than 70 percent of energy consumed in Thailand and, as described above, fossil fuel use is on the increase. The power and transportation sectors will remain the prominent users of fossil fuel well into the beginning of the next century

The most important GHG in Thailand is CO_2 which accounts for 90 percent of all GHGs. As far as non-CO_2 gases are concerned, methane (CH_4) and CO account for 5 and 4 percent of all GHGs respectively. A small quantity of NO_x and nitrous oxides makes up the remaining one percent.[65] As previously stated, the transportation sector contributed most to CO_2 emissions (40 percent), followed by the power generation sector (33 percent). The most heavily used fuels in the transportation sector are diesel, gasoline and aviation fuel respectively.[66] As already remarked, emissions from power

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61 *Ibid.*, p I The study was sponsored by the Asian Development Bank (ADB) to help Thailand to meet its obligations as a signatory to the Framework Convention on Climate Change, "focusing on the preparation of a national greenhouse gases emissions inventory" and to develop pragmatic, as well as economically and socially feasible policies, pp III-IV.

62 According to the estimates made by the WRI in 1987, Thailand emitted 1.13 percent of the global net increase of greenhouse gases (67 million out of 5 9 billion tons of global emission of carbon). However, the estimates from TDRI and TEI's study, using OECD methodology, reveal that Thailand emitted only 30 5 million tons of carbon Using a population of 56 million as a basis, the per capita release of CO_2 would be about 0 54 tons, *Ibid* , p 6-5

63 *Ibid* , p 3-22, taking 1990 as the base year, CO_2 emissions increased by 8 56 percent in 1991

64 *Ibid* , p iii

65 *Ibid* , p ii

66 Statistics from the Department of Energy Affairs, cited in *ibid* , p 3-14

generation are now increasing due to the greater use of lignite and coal and if this trend continues, the power generation sector will surpass the transportation sector within the next decade.[67] Another major source of CO_2 emissions is deforestation. It was estimated that Thailand emitted about 15.1 million tons of carbon through deforestation in 1989, or 0.27 tons per capita.[68] As far as the industrial sector is concerned, the "calcination" process in the cement industry produced about 5 percent of CO_2 in 1989.[69] Methane emissions in Thailand are estimated to be 5 to 6 percent of net global methane emissions and of these, agriculture (in particular paddy fields) contributed about 98 percent of total CH_4 emissions in 1989.[70]

3.4 Acid Rain

The most prominent threat of acid rain is posed by SO_2 emissions from electricity generation plants at Mae Moh in Lampang province in Northern Thailand. The plants have been sited there because of the availability of large lignite reserves in the area. The problem of acid rain received public and media attention in Thailand for the first time in October, 1992 when local people in a village around Mae Moh area complained about the impacts of SO_2 emissions from the plants on their respiratory systems and on their crops and livestock. Approximately 34 people were hospitalized and more than 1,000 people treated as out-patients.[71] The media coverage prompted Government Ministers to visit the area and promises were made that the plants would modify their power generation process, in particular scrubbers would be installed In September, 1994, complaints similar to those made in 1992 were again made by villagers around Mae

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67 *Ibid*, p 3-21

68 *Ibid*, p 3-98, this estimate is much lower than the 1 3 tons per capita as reported by the WRI in 1990/91

69 *Ibid*, pp ii and 3-33

70 *Ibid*, p iv

71 The number of people suffering from the impacts of acid rain over a longer period from October 1992 to 20 May 1993 is 4,276 The quantity of SO_2 emitted during October to November 1992 is 7 times over the permitted emission standard The impacts of acid rain was detected by the Environmental Health Centre of the Ministry of Public Health as far as 30 kms from the power station, see **Tan Setakit** Newspaper, 20-23 June 1993, p 1

Moh areas, but resulted in a much less media coverage.

Until now the acid rain problem has been seen as a problem with only localised effects. Systematic monitoring of the consequences of acid rain in Thailand is still lacking However, the Mae Moh incidents signal the need for more governmental attention to be devoted to the problems of SO_2 and NO_x emissions which are the precursors of acid rain. This is essential in view of the fact that power generation plants have been and, according to the Electricity Generating Authority of Thailand's (EGAT) plan to expand electricity supply, will be the dominant source of SO_2 emissions for at least the next twenty years. The Government's policy of encouraging more consumption of lignite for power generation will accelerate this problem It must be remembered, however, that there are other energy using sectors apart from the power generation sector which are major contributors to SO_2 and NO_x emissions. In the transportation sector, high diesel consumption is a significant cause of SO_2 emissions.[72] Furthermore, as mentioned, pollution will be aggravated by the conversion of industrial boilers to enable more use of lignite.

At the regional level, the acid rain problem deserves more attention when we consider the fact that other Asian countries are similarly increasing SO_2 and NO_x emissions due to their economic and industrial development. The growth in the use of coals and other fossil fuels has been substantial, especially in China, India and Japan, as well as in countries with smaller economies like South Korea, Thailand and Indonesia. China is beginning to feel the impacts of acid rain in its Southwestern province of Guizhon [73] Problems associated with the higher level and density of emissions from some areas in Asia are expected to arise.[74] A speculation based on meteorological and emission data

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[72] Chongpeerapien, **Energy and Environment**, *supra*, note 29, pp 121-22 and p 133

[73] *Ibid*, pp 134-5 citing data from the Workshop on Acid Rain in Asia (WARA) held at the Asian Institute of Technology (AIT) in Bangkok in November, 1989.

[74] *Ibid*, p 135 Such areas include Eastern and Southern India, Northeast and Southwest China, the Korean peninsula, Japan, Northern Thailand and Western Java

reveals that large quantities of acid deposition in Thailand could originate from China and India, and possibly from Indonesia and Malaysia.[75] Therefore, Thailand is potentially both an exporter and importer of acid rain. It is in the country's and region's interest that cooperative action should be initiated to control emissions as soon as possible before problems become exacerbated The experience in North America and Europe serves as a good lesson that, from both the environmental and economic point of view, preventive action is more desirable than cleaning up action after the damage is done Given that Asian countries will probably be unwilling to sacrifice their short term economic interest for the sake of longer term environmental benefits, the UN/ECE Convention on the Long-Range Transboundary Air Pollution of 1979 provides a good model for a starting point of preventive action. As discussed in Chapter 3, the Convention acted as a framework which provided the forum for developing more detailed and stringent emission controls by subsequent Protocols In the Asian context, such developments may take a long time considering the relatively low priority accorded to environmental considerations in the developmental process of the countries concerned.[76] This provides an even stronger reason why some kind of action should be taken now. As the only well established regional organization in Asia, the ASEAN is the appropriate forum within which to develop the necessary measures

4. Relevant Policies and Measures for Environmental Control

A number of measures have been taken by the Government to alleviate problems relating to air pollution In July 1991, unleaded gasoline for motor vehicles was introduced. In addition, a regulation introduced in 1991 reduced the level of lead content in leaded petrol from 0 40 g per litre to 0.15 g per litre [77] The demand for unleaded petrol increased steadily, from 1.2 million litres in 1991 to 310 million litres

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[75] *Ibid* , p 136

[76] See Chapter 7

[77] Notification of the Ministry of Commerce, No 5 (B E 2534) on quality standards of gasoline, Royal Government Gazette, Vol 108, Part 64, 9 April B E 2534 (1991), 3266

in 1992, and 890 million litres in 1993.[78] Use of unleaded petrol topped 1.3 billion litres in 1994 following a regulation requiring all new cars to have catalytic converters installed from 1 January, 1993.[79] Use of leaded petrol has been completely banned throughout the country from 1 January 1996 onwards. As regards diesel fuel, a regulation was introduced to reduce the distillation temperature of diesel oil at domestic oil refineries from 370° C to 357° C from 1 September, 1992 onwards, in order to increase lighter components of hydrocarbon in diesel fuel and thus improve combustion efficiency.[80] In addition, from 1 September, 1993 onwards, maximum sulphur content of all diesel fuel has been reduced from 1 percent to 0.5 percent.[81] Also a number of regulations now prescribe quality standards for engine oil used in two-stroke engined vehicles,[82] motor vehicles using diesel engines,[83] and motorcycles.[84]

The Government has also adopted a policy of extending vehicle inspection programme to private cars as well as trucks and buses.[85] Since September, 1994, private cars which are over ten years old have been inspected. It is recognised that this will necessarily require that authorized private inspection centres be involved in the inspection programme. Thus, two regulations concerning establishment of private inspection centres for motor vehicles had been enacted in 1993.[86] It has also been suggested that

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[78] *Unleaded Petrol Cuts Level of Lead Poisoning*, **The Sunday Post**, 19 March, 1995, p 24

[79] *Ibid*

[80] Notification of the Ministry of Commerce No 3 (B.E. 2533), Royal Government Gazette, Vol 108, Part 5, 10 January, B.E. 2534 (1991), 372.

[81] Notification of the Ministry of Commerce No 1 (B.E 2535), Royal Government Gazette, Vol 109, Part 10, 16 January B.E. 2535 (1992), p 541.

[82] Notification of the MOI, No 1702 (B.E 2534), Royal Government Gazette, Vol 108, Part 51, 21 March, B.E 2534 (1991), 2716.

[83] Notification of the MOI, No 1913 (B.E 2536), Royal Government Gazette, Vol 110, Part 134, 13 September, B.E 2536 (1993), 5. The product standards relate to the permitted emission from engine of carbon monoxide, hydrocarbon, nitrogen oxides, and black smoke.

[84] Notification of the MOI, No 1914 (B.E 2536), Royal Government Gazette, Vol 110, Part 134, 13 September, B.E 2536 (1993), 6. The product standards relate to the permitted emission from motorcycles' engines of carbon monoxide and hydrocarbon.

[85] At present, responsibility for inspection of vehicle emissions lies with the Police Department and the Land Transport Department of the Ministry of Interior. The Government has earmarked a budget of 28 million baht to implement vehicle emission inspection programme starting with the inspection of about 100,000 government vehicles in Bangkok.

[86] Regulations of the Department of Land Transport on Licensing of Private Inspection Centres

such inspection programmes eventually will need to be extended to cover all private vehicles. These measures are part of an effort to improve urban air quality, especially in Bangkok. However, to improve air quality in the long term requires more comprehensive and fundamental changes in energy policy than these as well as stricter enforcement of the applicable laws

As far as promotion of industry is concerned, in April 1992 the BOI made "restoration and conservation of the environment " one of its criteria in giving promotion privileges to industries.[87] A fair amount of economic analysis has been carried out by the TDRI, which is a highly influential institute in economic and environmental policies in Thailand, so that it can recommend appropriate policies and strategies for better management of pollution In particular, application of the PPP has been strongly advocated by the Institute. In this regard, measures such as the imposition of a pollution charge on a progressive basis according to the volume of pollution produced by industries has been proposed [88] This argument carries much weight given that most of the polluting industries are export-oriented. Failure to take into account the external costs would in effect mean that Thailand would be subsidising consumers abroad [89] It is also submitted that the PPP should be applied to fuel pricing, especially in the case of lignite, the price of which fails to take into account the environmental costs resulting not only from lignite mining but the pollution created from greater use of this fuel.[90] The

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for Motor Vehicles, and on Conducting of Vehicle Inspection by Private Inspection Centres, Royal Government Gazette, Special Issue, Vol 110, Part 134, 13 September 1993, pp 6-18

[87] The Board of Investment, **Investment Opportunities Study : Environmental Markets in Thailand**, November 1993, p 29, see also the Board of Investment Announcement, No 1/2536 on Policies and Regulations Governing promotion of Investment, Royal Government Gazette, Vol 110, Part 68, 27 May, B E 2536 (1993), pp 82-3 It was also stated that the Board would give priority to projects which help to maintain or rehabilitate the environment and natural resources

[88] Kritiporn, *supra*, note 6, p xxx

[89] See also J A McNeely and R J Dobias, *Economic Incentives for Conserving Biological Diversity in Thailand*, **AMBIO**, Vol 20, No 2, April 1991, pp 86-90 Among others, raising of tourists' entrance fees to national parks (unrealistically low at present) is recommended to cover the actual cost of parks' maintenance

[90] D Phantumvanit and T Panayotou, **Industrialization and Environmental Quality : Paying the Price**, TDRI, 1990, p 34, who explain that lignite is clearly underpriced because its

PPP is similarly recognised as essential in making those who benefit from land development pay for the environmental infrastructures necessary to support such development. Thus, it is suggested that some kind of "environmental impact fees" or "impact and betterment fees" should be imposed on land owners or developers at the time they propose new development.[91] The burden of the costs will be allocated between developers and purchasers according to the elasticity of demand. As far as energy policy is concerned, it has been proposed that the trend towards greater use of lignite and coal should be checked and a shift made to use imported natural gas from Malaysia, Myanmar and Vietnam and hydroelectric power purchased from Laos and Myanmar.[92] These alternatives have been found to be cost-effective and could lead to a significant reduction of Thailand's emissions.[93]

At the policy level, Thailand is currently operating under the Seventh National Economic and Social Development Plan (NESDP 1992-96).[94] The Seventh Plan identifies "environmental improvement for a better quality of life" as one of its principal objectives.[95] As far as air pollution is concerned, the Plan identifies two major sources

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cost does not reflect the fact that it is possibly the dirtiest energy consumed, especially as Thai lignite contains a high level of sulphur. The current price of lignite is twice or three times lower than that of other types of fuel. Furthermore, the royalties paid to the Government are minimal, being only 18 baht (US$ 0.72) per ton. Lignite mining also causes considerable environmental damage to the landscape. At present, EGAT pays 4 baht per ton for reclamation costs but it is not clear whether private mines supplying industrial boilers pay for any such costs.

91 B. Mekvichai et al., *supra*, note 1, p. 103. Environmental impact fees are defined as a one-time payment "required to be made by manufacturers, builders, or developers at the time of development approval, and are calculated to be proportionate to the cost of providing the physical infrastructure and environmental services needed to increase the carrying capacity of the land sufficiently to accommodate the new development and still protect the environment". They are said to have been successfully employed in Taiwan and Korea, as well as in the U.S. and Canada.

92 **Strategy on Climate Change**, *supra*, note 22, pp. 4-7 to 4-15.

93 *Ibid*.

94 The NESDP is a five-year economic and social development plan prepared by the NESDB. The first NESDP was initiated in 1961.

95 The other two main objectives of the Seventh Plan are sustenance of economic growth and more equitable distribution of income and human resource development. Environmental considerations did not enter into the first NESDP in 1961, but were introduced in the Third Plan in 1972. As part of the implementation of this policy, the Enhancement and Conservation of National Environmental Quality Act was enacted in 1975 (NEQA-75). The Act established the

which would contribute to increasing air pollution, namely industries, especially the cement and tobacco industries, and the use of lignite in electricity generation [96] It is also recognised that lack of proper control of the quality of fuel, such as benzene, diesel, fuel oils and lignite, as well as inadequate investment in the provision of mass transit system are factors which aggravate air pollution. With respect to this, it sets several targets, many of which have already been implemented by the Government as mentioned above.[97] The problem of climate change is briefly mentioned in two paragraphs where, in essence, the need to enhance reforestation to provide sinks for CO_2 and to disseminate information about these problems to the public is stressed [98] Of particular importance is the consistent broad reference to the need to implement the polluter pays principle in all areas of environmental management. However. it is not made clear how the principle should be implemented as far as control over air pollution and conservation of biodiversity are concerned

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National Environment Board (NEB), and, for the first time, laid down a requirement of EIA for projects of certain types and sizes During this period, the Industrial Environment Division and the Factory Inspection Division within the Department of Industrial Works were set up, in 1975 and 1977 respectively The Industrial Estate Authority of Thailand (IEAT) was also set up in 1972 The Fourth Plan urged the strict enforcement of existing laws to redress environmental problems In the Fifth Plan, some environmental problems relating to industrial development were identified, i e air, water and noise pollution, as well as problems of toxic and hazardous waste It also emphasized the need for participation of both the public and private sectors in solving environmental problems The Sixth Plan called for natural resources and environmental development and set out as one of its objectives, "an efficient use of the deteriorating and diminishing natural resources consistent with the protection of the environment", i e. the sustainable use of the limited and dwindling natural resources.

[96] NESDB, **The Seventh NESDP**, Chapter 3, p 216

[97] *Ibid* , pp 221-224 These include measures such as a reduction of lead in gasoline from 0 4 to 0 15 gram per litre from 1 January 1992, the requirement that catalytic converters be installed in new cars, the setting of vehicles emission standards for both motorcycles and cars, the reduction of distillation for diesel oil from 370° C to 357° C, the promotion of the use of less polluting fuels, in particular liquefied petroleum gas (LPG) in cars in BMA and compressed natural gas (CNG) in buses, the setting of standards to control emissions from industries and power generating plants, especially the emission of SPM and SO_2, the systematic monitoring of air quality; the installation of scrubbers in power generating plants, the provision of low-sulphur fuel oil and lignite to facilitate their use by industries and power plants which cannot afford installation of scrubbers, and finally the carrying out of a feasibility study of pollution-free energy sources such as natural gas and the development of international hydroelectric power (presumably in the Mekong River)

[98] *Ibid* , p 226

In short, the Seventh Plan is consistent with most of the prevailing discussion and research concerning environmental protection at the international level in its identification of problems and policies, as well as the measures needed to tackle environmental problems.

While there has been a certain amount of research aimed at identifying the problems and enabling policy recommendations, little has been done to explore the problems relating to development and enactment of environmental legislation. The following section and Chapters 5 and 6 will focus exclusively on existing environmental laws in Thailand both relating to the issues of air pollution and to conservation of biodiversity. Problems concerning the substantive provisions and enforcement of the laws will be identified so that an assessment can be made concerning whether or not Thailand is actually pursuing a path leading to sustainable development as required by the UNCED Rio Declaration and Agenda 21, relevant international conventions, and emerging international customary law

5. Environmental Legislation in Thailand

The most recent Constitution of Thailand was adopted in 1991.[99] Like its predecessors, it does not specifically provide for the right of citizens to a decent or a healthy environment. Preservation of the environment and natural resources are mentioned in general terms with respect to the duties of citizens and for guidance for the State's policies Section 48, while guaranteeing a right of citizens to engage in an occupation or business, provides that its exercise must be compatible with the need to preserve natural resources and the environment Section 58 specifically establishes a citizen's duty to preserve natural resources and the environment. The Constitution does not provide for any binding obligations concerning State actions Section 74 merely requires it, as a matter of policy, to preserve the environment, maintain a balance of natural resources

[99] Royal Government Gazette, Vol 108, Part 216, 9 December B E 2534 (1991) pp 1-79

and their sustainability, prevent and eliminate pollution, and plan for sustainable use of soil and water. Section 75 provides further that the State should proceed to raise the standard and life quality of its citizens. Similarly, Section 78 requires the State to adopt socio-economic, as well as demographic and technological developmental policies, which are consistent with the carrying capacity of the natural resources. These provisions aim to give guidance to the State in the conduct of governmental policies They do not give rise to a right of action against the State for failing to carry them out.

In response to growing concern for environmental degradation both at the international and national levels, Thailand undertook a major overhaul of domestic environmental legislation in 1992 when a series of laws was enacted to promote better environmental management. Of these, at least five pieces of legislation are of particular relevance to air pollution control and conservation of biodiversity. These are :

(1) The Enhancement and Conservation of National Environment Quality Act, 1992,

(2) The Factory Act, 1992;

(3) The Hazardous Substances Act, 1992,

(4) The Energy Conservation Act, 1992,

(5) The Public Health Act, 1992, and

(6) The Wildlife Conservation Act, 1992

These new laws reflect the fact that, after a period of high economic growth, Thailand is beginning to pay more attention to the environmental impacts of its economic development. This does not mean, however, that no legislation dealing with environmental problems existed prior to 1992. On the contrary, legislation did exist in the respective areas of concern The new laws have, therefore, been aimed at improving the efficiency of environmental management practices; it is thus important to examine them in order to assess whether or not they are achieving their objectives.

It is proposed first to look at development of environmental law in Thailand from a broad perspective and then to consider the relevant laws dealing specifically with the

issues of air pollution and conservation of biodiversity. Thus, this section will focus on the broad legal framework which encompasses environmental issues in general. This will necessarily involve, in particular, discussion of the Enhancement and Conservation of National Environmental Quality Act of 1992 which is the first and most innovative and comprehensive piece of environmental legislation and which is considered to possess great potential for improved environmental management

5.1 The Legal Framework of Environmental Protection in Thailand - The Enhancement and Conservation of National Environmental Quality Act, 1992

The Enhancement and Conservation of National Environmental Quality Act (NEQA-92)[100] is considered to be the most important and comprehensive existing legislation for environmental protection in Thailand The Act abolished the NEQA of 1975 and contains many innovative provisions which reflect an integrated approach to environmental control It also incorporates, albeit to a limited extent, some principles for sustainable development, such as the PPP, EIA, citizens' right of access to environmental information, and public participation The National Environment Board (NEB), which formerly possessed only advisory powers, was raised to the status of a sub-cabinet body chaired by the Prime Minister, with the Minister of the MOSTE[101] acting as vice-chairman Another major institutional change brought about by the Act is the replacement of the Office of the NEB by three government departments which now have the prime responsibility for environmental management and enforcement of environmental standards These are the Departments of Environmental Policy and Planning, Pollution Control and Environmental Quality Promotion, all of which are affiliated to the MOSTE Each of these Departments consists of several Divisions having classified and detailed functions in their respective areas.[102]

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[100] Royal Government Gazette, Vol 109, Part 37, 4 April, 1992.

[101] The Ministry was formerly the Ministry of Science, Technology and Energy It was renamed in 1992 by an Act of Parliament to formally signify its increasingly important functions in the area of the environment

[102] The structuring and functions of the three Departments were instituted by three separate Royal Decrees to complement the NEQA-92 A Royal Decree is, like a Ministerial regulation, a

In essence, the NEQA 1992 created a new NEB consisting of 23 members, fifteen of whom are members *ex officio*, namely Government Ministers and officials from governmental agencies concerned. The remaining eight members are appointed from outside environmental experts and at least half of them must be representatives from the private sector.[103] The term of office of these environmental experts is three years and they may be appointed for no more than two consecutive terms.[104] For the first time, an Environmental Fund was created The Fund is made up mainly of, *inter alia*, the defunct Oil Reserve Fund, the revolving fund for improvement of environmental and life quality allocated by the annual budget, and the service charges and fines collected under the Act.[105] The Government has committed an initial sum of five billion baht from the former Oil Reserve Fund to the Environmental Fund. The Fund is to be administered by a Fund Committee of seventeen members chaired by the Minister of MOSTE.[106]

The Act provides the NEB with a comprehensive set of functions ranging from setting environmental standards and policies to proposing laws and legislative changes for environmental protection, as well as the overall responsibilities to oversee environmental management by various governmental agencies and to monitor environmental standards

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kind of subordinate legislation in Thailand The usual procedure is that a draft Royal Decree is proposed by the Minister concerned to the Cabinet If it is approved, it will be (unlike a Ministerial regulation which will be signed by the responsible Minister) signed by the King and announced as law in the Royal Government Gazette Like a Ministerial Regulation, the power to enact Royal Decrees must normally be based on a particular Act of Parliament although there are some kinds of Royal Decrees which the Executive is given power by the Constitution to enact at its discretion

[103] NEQA 1992, Section 12

[104] *Ibid*, Section 14

[105] *Ibid*, Section 22

[106] *Ibid*, Sections 24-25 The Committee is composed of twelve government officials who are members *ex officio*, and another five members appointed from outside experts by the NEB It is to set out terms and conditions for the use of the Fund During the first two years since the Act came into force, most of the Fund has been committed, almost all of which to projects involving construction of central waste water treatment facilities in major urban areas

throughout the country.[107] The NEB has the functions of approving the "Environmental Management Plan", as proposed by the MOSTE, and provincial environmental management plans as proposed by the provinces.[108] One of the most important responsibilities of the NEB is the setting of various environmental standards for inland waters, coastal waters, ground water, ambient air quality, noise and vibration, and other ambient standards, as well as approving emission standards from point sources as proposed by the Ministries concerned [109]

5.1.1 Conservation Zone, Environmental Protection Zone, and Pollution Control Zone

Another new feature of the NEQA 1992 is the provisions which empower the Minister of the MOSTE, upon recommendation of the NEB to issue a ministerial regulation designating a particular area as a *"conservation zone"*, *"environmental protection zone"* or a *"pollution control zone"*. The designation of an area as one of these zones warrants special measures for environmental management, including the setting up of higher environmental standards than those already set by the NEB. A conservation zone is an area which has been designated as a national park, or a wildlife sanctuary, preserved areas for tourism or other protected areas as prescribed by laws.[110] These areas are to

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107 *Ibid.*, Section 13.

108 *Ibid* See the MOSTE Notification on Environmental Management Plan, Royal Government Gazette, Vol 110, Special Issue, Part 136, 15 September, 1993, p 1. This constitutes only a short-term environmental management plan while a long-term one is being drafted As far as the provincial action plans are concerned, according to an interview conducted by the author with an official at the Department of Environmental Policy and Planning in August 1994, 66 and 72 provinces of the country's total 75 provinces have proposed their action plans for the fiscal years of 1994 and 1995 respectively Some provinces did not propose an environmental management plan due to both lack of adequate understanding about the new law and of the personnel to prepare a plan

109 *Ibid* , Sections 32 and 13 (8) According to Section 55, the Minister, with the advice of the Pollution Control Committee and with the approval of the NEB, is empowered to set emission or effluent standards from point sources The Pollution Control committee is a nineteen-member committee chaired by the Permanent Secretary of MOSTE and is composed of the Director-Generals of various government departments Not more than five of the committee members are to be outside experts appointed by the NEB

110 *Ibid* , Section 4

be managed according to the respective laws which designate them.[111] An environmental protection zone is defined as a watershed area, or an area which has a different ecology from other areas, or an area whose ecological system can be easily destroyed or affected by human activities, or an area which possesses natural and artistic values, which has not already been designated as a conservation zone.[112] This provision for an environmental protection zone is important and has a great potential for habitat protection as it enables other areas, outside those already designated under the traditional habitat and wildlife protection laws, to be protected from further environmental degradation. In 1992, three areas of natural and ecological values were designated as "environmental protection zones".[113] These comprise mainly coastal areas which are threatened by developments and tourism.[114] Activities in these areas will be restricted following their designation as environmental protection zones Construction of hotels and condominiums is prohibited in some of them, such as around the Pee Pee islands. On the designated eastern coasts, no industrial plants may be set up except those that have obtained permission prior to the designation. In all of them, human activities destructive to the ecology and habitat of the areas are prohibited These include sand dredging for commercial purposes, mining, anchoring in the coral reef areas, removing or damaging coral reefs and the catching of beautiful fishes in the coral reef areas, commercial shrimp farming, fishing by methods which would harm young fishes, land filling in the coastal areas, discharge of untreated effluents into the sea, and transport of hazardous substances by pipelines. An environmental impact assessment is required for projects for construction of ports, power plants and land developments [115]

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111 *Ibid*, Section 42
112 *Ibid*, Section 43
113 MOSTE 's Ministerial Regulations No 1-3, 30 September, 1992
114 *Ibid*, they consist of several islands, coastal waters extending seawards to a distance of three kilometres and a number of gulf areas around the eastern coasts of Chonburi province, around the Phuket island in Phuket province and around the group of islands (other than the Pee Pee islands which, as will be seen later, have been declared a "pollution control zone") in Krabi province in the South
115 *Ibid*

Another type of designated area which has been considered important and which has received much publicity is the "pollution control zone". In essence, a pollution control zone is a geographical area within the country where pollution problems have become so serious that, if no remedial measures were taken, human health and environmental quality would be endangered. In such cases, the Act authorizes the NEB to declare the affected areas to be a pollution control zone so that special measures can be taken to "control, reduce and eliminate pollution".[116] This is viewed as a progressive provision as it allows the central government to take action where lax enforcement of environmental laws by the relevant government agencies, i.e. those with direct responsibility for the matter, as well as by local officials in the areas concerned, has led to deteriorating environmental conditions. If appropriately and consistently employed, this provision could, in conformity with the precautionary principle, rectify environmental problems before it is too late and encourage responsible local officials to improve law enforcement to avoid the embarrassing situation of the central Government having to step in When that happens, local officials, under the supervision of the Provincial Governor, have to design a pollution reduction and elimination action plan in the area concerned If no such action is taken within an appropriate time, the Provincial Governor has the power to take appropriate action after notifying the relevant local officials and the NEB.[117] To date, six areas have been declared as pollution control zones. These are Pattaya, the Phuket island (or Phuket province), the Haad Yai District and Muang District in Songkla province, the Pee Pee islands in Krabi province and Samut Prakarn province [118]

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116 *Ibid*, Section 59

117 Sections 60-63 Under the Thai administrative system, a Provincial Governor is appointed by the Ministry of Interior

118 It is notable that these areas (except for Samut Prakarn which is an industrial town forming part of the BMR described earlier in this chapter) are all tourist attractions which have been degraded by private enterprises in the service industry which supports tourism The major causes are effluent discharges from hotels, restaurants, condominiums and resort facilities The tourist industry has long been considered one of Thailand's major source of foreign revenue However, the environmental degradation posed by tourism, as well as many other problems which have been brought about by it, such as prostitution, AIDS and loss of cultural values,

5.1.2 Environmental Impact Assessment

The Act also requires an EIA for projects of certain types and sizes. Although an EIA has been required in Thailand since 1975, when the first NEQA was enacted, it was not based on effective control procedures. A list of specified projects for which an EIA was required was not announced until 1981; it included certain types and sizes of projects, such as dams or reservoirs, irrigation, airport, hotels or resort facilities along coastal areas, riversides or in national parks, highways, mining, industrial estates, harbours, power plants, and eight types of industries including the petrochemical industry, oil refineries, natural gas processing, and the chlor-alkaline, iron and steel, cement, smelting and pulp industries.[119] Prior to 1992, there was no element of public participation in an EIA process. Moreover, an EIA report was normally reviewed by government officials of the former Office of NEB which was heavily restricted by its limited powers and lack of suitably qualified personnel. Even though some recommendations were made by the NEB, there was no guarantee that they would be taken into account by the agencies authorised to approve the projects concerned.

The new NEQA of 1992 has brought about a few changes in the EIA process. First of all, the types of projects which require EIA have been substantially expanded As well as including those already listed under the old law, another nine items have been added to the list.[120] For our purposes, they include projects in areas designated by the Cabinet as "first class water basins", coastal reclamation projects, land developments, and all sizes of public roadworks cutting through ecologically sensitive areas such as, *inter alia*, wildlife sanctuaries, national parks, and mangrove forests designated as conserved

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clearly indicate that industry needs much better management and regulation In particular, there should be better observance of environmental regulations on the part of private entrepreneurs who are profiting from tourism while the environmental costs are being borne by the public

[119] Notification of the Ministry of Science, Technology and Energy on Types and Sizes of Projects requiring EIA, Royal Government Gazette, Vol 98, Part 158, 27 September, 1981

[120] See the two Ministerial Notifications of MOSTE, dated 24 August, 1992 and 9 September, 1992 respectively

forests.

The approval process for an EIA report depends on whether or not it is the type of project which require cabinet approval. For projects which require cabinet approval (e g big-sized dams or reservoirs, irrigation projects, airports and highways), an EIA report must be submitted to the NEB at the feasibility study stage of the project. The NEB will then, after considering the report, submit its opinions together with the report to the cabinet for approval [121] No time limit is laid down for the approval of an EIA report in such cases. Although the cabinet may request an expert or any institution specialised in EIA to conduct such a study as part of its approval process, this is rarely done in practice.[122] For other projects which do not require cabinet approval, a significant change in the EIA procedure is the use of expert committees to consider the EIA reports These consists of qualified experts drawn from various disciplines appointed by the NEB,[123] representatives of the agencies or departments authorised to approve the relevant projects must be included If an expert committee disapproves a particular EIA report, the relevant agency must withhold its permission for the project until its proponent has amended the report or submits a new report as suggested. It is worth noting that the law does not provide clearly for the event that an expert committee disapproves the amended or new report In other words, it is not certain whether an expert committee's decision would bind an agency which possessed the power to approve the project in question. This is a crucial point on which the effectiveness of the

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121 *Ibid*, Section 47

122 Information from an interview with a legal officer of MOSTE, Bangkok, 2 September, 1994

123 *Ibid.* At present, there are five committees for different types of projects, namely mining, transportation, industry, hotel, and dams or reservoirs Following a submission of an EIA report, the Office of Environmental Policy and Planning (OEPP) has to consider and prepare its preliminary opinion on the report within 30 days before processing the report to the respective committee Upon the receipt of the report, the committee has to complete its consideration within 45 days If it does not, it will be presumed to have approve the report If the committee does not approve the report, the proponent of the report must amend it according to the recommendations made by the committee, or submit a new report In this second round of report review, the committee must conclude its finding within 30 days, see Sections 48-49

EIA process rests

At this stage, it is difficult accurately to evaluate the extent to which the NEQA 1992 has improved the effectiveness of EIA in Thailand because the new law has been in force for so few years. However, it can be expected that the involvement of experts in the EIA approval process, instead of it being left solely to government officials as in the past, should enhance its role as a tool for environmental management. The drop in the number of approved EIA reports since the operation of the new Act may indicate this According to the OEPP's records, the percentage of approved EIA reports from September 1981 to March 1992 was 62 79 but this figure dropped to 40.17 from June 1992 to the end of 1993.[124] Mining projects represented the largest category of the EIA reports submitted

5.1.3 Public Participation

The NEQA 1992 also attempts to incorporate the principle of public participation by recognising the role of NGOs in environmental protection, citizens' right of access to environmental information, and, to a very limited extent, the concept of a "citizen's suit". Section 6 of the Act lists five categories of rights and duties for citizens. These are, *inter alia*, the right of access to environmental information from public authorities, except that deemed by the authorities to need to be kept secret for reasons of national security, or because it is related to personal rights, property rights or commercial rights or activities protected by law.[125] This provision stipulates, for the first time, the right of access to environmental information but permits a number of broad exceptions which undermine its importance Moreover, public ignorance of the right's existence, coupled

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124 Cited in P P. Eamsakulrat, *Environmental Impact Assessment in Thailand*, TDRI Working Paper, 1994 See also J Tongkasem's paper (no title is given) presented at a Conference organised jointly by the OEPP and other governmental Departments on "Directions for Improving EIA in Thailand", Bangkok, 20 November 1995, pp 2/21-2/22 where it is stated that more than 50% of EIA reports submitted to the OEPP each year fail to get approval Among others, shortage of qualified personnel and lack of experience among the OEPP's staff in considering EIA reports are the major causes of inefficiency and delay

125 Section 6 (1)

with the unchanged attitudes of the officials concerned could impede the realization of such right. Above all, it is not clear what the legal position would be if a citizen requested information but such information was then wrongfully denied to him or her.[126] Following the first and the only test case under the 1992 NEQA, his prospects are not very promising.[127] The case had been brought against the Government with respect to its decision to use a piece of wetland in Bangkok for constructing governmental buildings. The plaintiffs claim, *inter alia*, the right to environmental information concerning the building plans but this was denied by the Court of first instance on the ground that although the 1992 NEQA provided for such a right, it did not specify the duties which governmental agencies had with respect to that right. On appeal, the Court Appeal decided that the plaintiffs had only a right to recommend to the NEB that it should designate the disputed area as an environmental protection zone under the 1992 NEQA. Such right does not give the plaintiffs the right to demand the designation which rests solely on the NEB's discretion Moreover, the plaintiffs had no right to seek the withdrawal of the relevant Cabinet Decision authorising construction of governmental buildings on the site because the Decision was lawful. As far as the plaintiffs' claim that the Decision violated their public rights on the use of the wetland which was deemed to be public property is concerned, the Court ruled that the plaintiffs had no legal standing to sue because only persons who had sufferred special damage would be granted such legal standing. This case demonstrates the Court's reluctance to exercise judicial review over administrative acts, which, arguably, have created adverse environmental impacts The Thai judiciary has the tendency to acquiesce in

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126 It is worth noting that the extent that Section 6 (1) can guarantee the right to environmental information is unclear since Section 6 provides generally that all the rights and duties under the Section "*may* be accorded to individual person as provided by" (emphasis added) the NEQA or "governing law related thereto

127 *Panat Tasneeyanond and others V. The Prime Minister, The Minister of MOSTE and the Director-General of the Inland Revenue Department* The case was brought on 21 April 1994 and decided by the Court of first instance on 25 April 1994 An appeal was filed on 25 May 1994 and decided by the Court of Appeal on 5 June 1995. The case is now pending in the Supreme Court. For more details, see summary of the case which has been informally translated from the pleadings of the case into English by the writer and included as Appendix IV of this thesis

administrative acts which are executed according to lawful procedure without looking into such innovative legal concepts as the public right to a healthful environment or to environmental information. Furthermore, the development of administrative law in Thailand is still at an embryonic stage. Though an administrative court is to be established in the near future, it is not yet decided whether it should be part of the existing judicial system under the Ministry of Justice, or attached to the Office of Juridical Council (a government department responsible for drafting and interpretation of legal provisions at the Government's request). Even if the administrative court is successfully established, it is not difficult to predict that citizens who want to assert this right will have many obstacles to overcome in order to prove that the information is outside the scope of the exceptions or that the information has been wrongfully denied to them. This fact, together with the non-litigious nature of Thai society, signals the likelihood that this right will take a long time to become firmly established as an effective tool for environmental control

Citizens also have a right to claim damages or compensation from the State in the event that they have sustained an injury as a result of pollution created by State enterprises or enterprises which are initiated or promoted by the State.[128] On the basis of concepts vaguely reminiscent of the "citizens' suit", Section 6 (3) provides that a citizen *may* have a right to file a complaint against another person if he or she has found that there is a violation of pollution control or natural resource conservation laws. The scope of this provision is unclear as there is no specific reference to a requirement to prove damage Some academics have interpreted this subsection to mean that citizens, in particular NGOs, are given the right to initiate legal action against offenders against environmental laws, but government officials have consistently held the view that such a right is restricted to persons who have suffered damage The latter view is in line with the traditional judicial decisions in Thailand where proof of damage is necessary to create

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[128] Section 6 (2)

the requisite legal standing to bring an action. However, according to the drafters of the Act, the wording of the subsection was deliberately left broad and vague so that the substantiation of such right could be developed through case law in the future [129] It would not have been possible for the Act in 1992 to establish a principle which would clearly reverse the existing rule which had always prevailed in judicial practice. In the light of this background and reasoning, the subsection can hardly be regarded as revolutionary. It can be predicted that, at least in the foreseeable future, bringing an action will always require a proof of damage (as illustrated in the above case) because it will be difficult to change the conservative judicial opinion which prevails in Thailand where judges still lack understanding of emerging modern environmental principles.

The involvement of NGOs represents another attempt by the Act to promote public participation in environmental management. The Act enables those NGOs which are juristic persons under Thai or foreign law and which are also non-political and non-profit organizations to register as NGOs for environmental protection and natural resource conservation [130] These NGOs are entitled to receive assistance and promotion from the State in the conduct of their various activities, *inter alia*, the provision of volunteers for their work, dissemination of information for consciousness raising, giving help to people in any specific geographical area, research and legal aid to people who have suffered injury from pollution, including representing such people to enable them to bring an action for damage.[131] Furthermore, they can propose projects for funding by the Environmental Fund, whereby funds may be allocated to them with the approval of the NEB [132] They may also nominate a representative to be appointed as a member of the NEB.[133] Given that assertion of rights by individuals is relatively weak in Thailand, NGOs present an attractive avenue through which the environmental rights of

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[129] Interview with Dr Panat Tasneeyanond, a drafter of the NEQA 1992, August, 1994
[130] NEQA 1992, Section 7
[131] *Ibid*, Section 8
[132] *Ibid*, Section 8 (3)
[133] *Ibid*, Section 8 (4)

individuals and society as a whole can be protected. However, unfortunately NGOs in Thailand are fragmented, scattered, and uncoordinated, though a few major NGOs in Bangkok have consistently pursued environmental objectives. Elsewhere, even in major cities such as Chiang Mai, they still lack solid institutional structure and clear policies in pursuing their environmental activities. Some of the active NGOs in Bangkok have exercised their right to request funding from the Environmental Fund, but many have complained that governmental regulations concerning the release of the fund and the complicated procedures relating to account reporting and auditing have made it extremely difficult for them to meet the requirement. In some cases, the delay in obtaining releases from the Fund has frustrated the operation of a project which is partly funded by other sources As a result, some of the NGOs which have been allocated funds have indicated that they wish to waive their right to use them and some prefer not even to apply to the fund at all [134]

5.1.4 The Precautionary Principle

Some elements of application of the precautionary principle can be seen in the Act. In particular, Section 96 creates strict liability for operators of a point source from which a release of pollution has occurred, when such a release has led to an injury to life, body, health of other persons, or damage to the property of other persons or of the State The operators are liable to pay for damages in such cases without any requirement of intent or negligence on their part [135] The damages and compensation for which operators are liable under this provision include all the expenses which the Government has incurred in taking measures to mitigate the effects of the pollution and the costs of the loss or damage caused to natural resources or public goods [136] Another provision which has

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[134] Information provided by an official of the Pollution Control Department, MOSTE, at an interview on 3 September, 1994

[135] Exemptions for liability in this Section are typical of those found in most liability conventions and in the laws of other countries These are circumstances of *force majeure* or war, acts committed in pursuance of an order from the Government or its officials, and where the commission or omission which causes damage is the act of the victims themselves or the act of other persons directly or indirectly responsible for the release of the pollution

[136] NEQA 1992, Section 96 (2)

been considered by drafters as embracing the precautionary principle is the requirement in Section 10 for the Minister of MOSTE to establish a contingency plan to mitigate pollution impacts in the event of danger or emergency caused by pollution

5.1.5 The Polluter Pays Principle

As far as application of the PPP is concerned, the Act provides for a duty of owners or occupiers of "controlled point sources", namely industrial and power plants, to install pollution treatment facilities for emissions.[137] In the case of water discharge, if the operator has not installed sewage treatment facilities and where the area in which the point source is located has been declared a pollution control zone, or has central waste water treatment facilities, the operators have a duty to send their sewage for treatment at such facilities and must pay fees for such service. The NEB, with the advice of the Pollution Control Committee, is authorised to set the amount of charges to be made in different localities [138] It is also notable that the Act imposes heavier fines on operators who evade their obligations to operate waste treatment facilities or to send their waste for treatment at central treatment facilities, or to pay for treatment charges [139] However, an important exception is made for residential houses.[140] This exception is probably based largely on economic and social considerations, viz, that most of private households are not willing to pay for such charge and the fact that there is a lack of adequate infrastructure to convey waste water to central treatment plants Even for the industrial sector, which is required to send waste water for treatment, the infrastructure to support the provision is still insufficient. In most cases, this shortcoming is to be remedied by the institution by industrial plants of their own existing treatment facilities, as already required by law prior to the NEQA 1992. Since waste water from residential

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[137] *Ibid*, Sections 68 (2) and 70 (1)
[138] *Ibid*, Section 88
[139] *Ibid*, Sections 90-91. Offenders are liable to pay a fine four times higher than the charge set for the treatment of the waste In the case of operators who omit to operate their own treatment facilities, the fine is four times higher than the normal costs for such operation. Fining is to continue on a daily basis until the legal provisions are complied with
[140] *Ibid*, Section 89 (2)

and agricultural sectors is the most important cause of water pollution, accounting for 93 percent of the total load of Biochemical Oxygen Demand (BOD) in the Mae Klong River in 1990 and for 75 percent of the BOD load in the Chao Phraya River in 1988,[141] this exception indicates that the PPP is far from being fully applied in practice.

Central treatment facilities are not, however, appropriate in the context of controlling air pollution because of the nature of such pollution. The residential sector is not directly responsible for the creation of air pollution problems (but it is so indirectly, being the major consumer of energy) The most effective way to control air pollution is to require industrial and power plants to instal facilities or equipment to reduce and control their emissions. Therefore, much will depend on the setting of appropriate emission standards for purposes of controlling pollution and on the enforcement of such standards.

The above outline and discussion of the NEQA 1992 reveal that the Act is the most comprehensive piece of Thai environmental legislation to date which will probably form the core of the development of environmental laws in Thailand for decades to come. It seeks more effectively to extend the reach of the law to encompass all areas of environmental problems Various means are employed to improve the effectiveness of environmental control through measures such as the setting up of environmental protection zones and pollution control zones, and as will be seen later in the discussion on air pollution control, the enforcement powers of "pollution control officials" have also been greatly strengthened. In the context of conservation of biodiversity, the Act is relevant in its measures for preservation of natural habitat by providing for designation of environmental protection and pollution control zones and its expanded as well as more effective requirements for environmental impact assessment. The overview and framework of relevant environmental laws having been established, the following

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141 **Thailand National Report to UNCED**, June 1992, pp 122-3

Chapters will deal in more detail with specific laws relating to the control of air pollution and the conservation of biodiversity.

CHAPTER 5

LAWS RELATING TO AIR POLLUTION CONTROL IN THAILAND

1. NEQA 1992

The NEQA 1992 remains one of the laws most relevant to air pollution control. The control of air pollution involves many governmental agencies depending on the type of source of pollution. The NEB is responsible for setting national ambient air quality standards, and according to the new NEQA, has the power to approve emission standards from point sources as proposed by the Minister of MOSTE. It is important to point out that prior to 1992, emission standards were largely set by the governmental departments directly responsible for the point sources concerned. For instance, the Department of Industrial Works (DIW) was responsible for setting emission standards for industrial plants, and the Police Department and the Department of Land Transport were responsible for setting emission standards for vehicles. However, upon examination the writer found that before 1992 the former NEB had also set emission standards for vehicles whereas the regulation of emissions from industrial plants was left, and, as will be seen later, still is, largely to the DIW. Theoretically, therefore, the NEQA 1992 should have the effect of centralising the administration of regulations and monitoring of emission standards In practice, however, the situation remains the same as before the Act came into force. This raises an important question as to whether the MOSTE has the capability to fulfil its role as envisaged by the Act.

"Air pollution" is defined by the Act as waste in the forms of vapour, smoke, gas, soot, dust, ash and other polluting substances which are fine and light enough to integrate into the atmosphere.[1] According to Article 32, the NEB is given the power to set national ambient standards relating to inland waters, coastal waters, ground water, air, noise and vibration. It is also authorized under Section 33 to set higher standards for conservation,

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[1] NEQA 1992, Section 4

environmental protection and pollution control zones. With respect to the former, it has set ambient quality standards for inland waters,[2] coastal waters[3] and sewage effluents from big buildings.[4] Except for the wider coverage of buildings whose effluents are to be controlled, the parameters and standards newly set are identical to those existing before the 1992 Act.[5] The ambient air quality standards have not been officially enacted but according to the legal officer responsible for drafting the above standards, they will also be identical to the standards set by the former NEB in 1981.[6] In other words, the Act has not led to more stringent environmental standards. In comparison to western countries, especially the U.S , the air quality standards set in Thailand are much lower. Thus, it is far from satisfactory that, over ten years later, the standards remain at the level at which they were first set in 1981. The reason may be that the existing ambient standards are considered to be sufficiently high for environmental protection, given the stage of the country's economic and social development. However, at the time of writing, more stringent air quality standards have been proposed and approved by the NEB.[7] These have yet to be enacted. Importantly, apart from the increased stringency of some of the new standards, a new parameter is added to the original six parameters, namely particulates with a diameter less than 10 microns, which are mainly caused by

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2 Notification of MOSTE on Inland Waters Standards, dated 20 January, 1994, Royal Government Gazette, Vol 111, Part 16, 24 February, 1994

3 Notification of MOSTE on Coastal Waters Standards, dated 20 January, 1994, Royal Government Gazette, Ibid

4 Notification of MOSTE on the Types of Buildings as Controlled Point Sources of Waste Water Effluents, and on the Waste Water Effluent Standards for Controlled Buildings, 10 January, 1994, Royal Government Gazette, ibid

5 Comparable to the standards set according to the former Ministerial Notifications of 30 October, 1989 (effluent standards from controlled buildings),12 December, 1985 (inland waters standards), 7 June, 1991 (coastal waters standards)

6 Interview conducted by the writer with the chief legal officer of MOSTE on 2 September 1994 For the ambient air quality standards set in 1981, see Notification of the NEB, dated 6 November, B E. 2524 (1981), Royal Government Gazette, Vol 98, Part 197, 1 December, B E 2524 However according to a recent press report, the Director-General of the Pollution Control Department, the Department is in a process of preparing an air quality management action plan which will soon be submitted to the Cabinet for approval Moreover, the Department has a plan to raise air quality standards, based on EC standards, but this will have to be done on a step by step basis from 1996 to 1999 to allow the industrial sector to adjust itself, see **The Manager**, Bangkok, 21 September 1995, p 12

7 **Matichon Daily**, 12 February, 1995, p 21. According to the report, the new proposed standards were approved by the NEB on 29 December, 1994

black and white smoke emitted from motor vehicles.[8] The comparison of the existing and the newly proposed standards can be summarised as follows :

Pollutant Standards	Average Value	Existing Standards	Proposed Standards
CO	1 - hr	50 mg/m^3	30 PPM (34.4 mg/m^3)
	8 - hr	20 mg/m^3	9 PPM (10.3 mg/m^3)
NO_2	1 - hr	0.32 mg/m^3	-
SO_2	24 - hr	0.30 mg/m^3	-
	1 - yr	0.10 mg/m^3	
SPM	24 - hr	0.33 mg/m^3	-
	1 - yr	0.10 mg/m^3	
O_3	1 - hr	0.20 mg/m^3	-
Lead	24 - hr	10 ug/m^3	-
	1 month		1 5 ug/m^3
PM10	24 - hr	-	120 ug/m^3
	1 - yr	-	50 ug/m^3

Note : CO = Carbon Monoxide; NO_2 = Nitrogen Dioxide
SO_2 = Sulphur Dioxide SPM = Suspended Particulate
O_3 = Photochemical Oxidant Matter
PM10 = Particulate with diameter less than 10 microns

The importance of improved air quality standards, if finally enacted, should not, however, be overstated especially as it is generally known that monitoring of these standards have always been lax. It has been observed by one official interviewed that there is no point in setting a wide range and high standard of parameters for monitoring that Thailand is not capable of attaining because of the inadequate techniques available for measurement as well as the impossibility of effectively enforcing them. Although the Act enables higher standards to be set for conservation, environmental protection and pollution control zones, the actions taken in these zones have been mostly those related to ensuring stricter law enforcement rather than the setting of new standards

[8] *Ibid* ; also documents for training on management of air quality, organised by the Department of Environmental Quality Promotion, MOSTE, Patum Thani, 24-28 April, 1995, on file with author.

The NEQA 1992 authorizes the Minister of MOSTE, with the approval of the NEB, to set emission standards from point sources instead of leaving them to the governmental agencies responsible for the point sources concerned. To date, what MOSTE has done is to set emission standards for black smoke and carbon monoxide from motor vehicles.[9] Again, this latest set of standards is identical to those in force prior to the Act.[10] At the time of writing, MOSTE has not set emission standards for industrial plants but these are said to be in process of drafting.[11] The DIW has recently enacted emission standards from industrial plants specifying permitted levels of 14 types of pollutants.[12] It can be assumed that MOSTE will eventually set emission standards for all point sources and for all types of pollution as authorized by the Act, but most of the standards will resemble those already existing. It is difficult to interpret this trend : can it be regarded as a starting point, which might lead to development of more stringent standards in the future, or should it be regarded as evidence of the bureaucratic inertia of officials, administrators or policy makers, unresponsive to growing environmental concern, as well as of a lack of political will on the part of the Government to strive for better

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9 Notification of MOSTE on Emission Standards of Black Smoke and Carbon Monoxide from Motor Vehicles, dated 28 August, B E 2535 (1992); Royal Government Gazette, Vol 109, Part 119

10 Compare to Notification of the Office of the National Environment Board, dated 28 January, B E 2531 (1988), Royal Government Gazette, Vol 105, Part 73, 3679

11 Confusion seems to exist with respect to the power of MOSTE over industrial plants One of the questions is whether MOSTE has power to control industrial plants without designating them as "controlled point source" under the NEQA first According to the Director-General of the Pollution Control Department at the time of writing, the answer is in the negative and he specified this as a reason that MOSTE should move to designate industrial plants for such purpose, see **Bangkok Business**, Bangkok, 4 September 1995, p 3 This interpretation is very arguable given the clear power given to MOSTE by the Act. It reflects how the state bureaucracy fails to keep up with innovative laws However, it is doubtful whether such a move by MOSTE would meet with approval by most of its officials since, according to an interview conducted by the writer on 18 January 1996 with the Director of the Northern Environmental Office, a regional environmental office set up by MOSTE under the NEQA, the *status quo*, under which supervision of industrial plants is left mainly to DIW officials, was to be preferred Such a move, if made, would force an undesirable result of conflicts between MOSTE and DIW officials

12 See Notification of the MOI, No 2, B E. 2536 (1993), dated 20 July, B E. 2536 (1993), Royal Government Gazette, Vol.110, Part 109, 12 August, B E 2536 (1993), 12 The pollutants whose permitted levels of emission are regulated are suspended particulate matter, antimony, arsenic, copper, lead, chlorine, hydrogen chloride, mercury, carbon monoxide, sulphuric acid, hydrogen sulphide, sulphur dioxide, oxides of nitrogen, and xylene.

standards as professed by the landmark legislative changes in 1992? The personal views and policy of the Minister of MOSTE may be another factor affecting changes, as can be seen from the recently proposed new air quality standards following the Cabinet reshuffle around that time. In any event, it is highly desirable that more aggressive environmental policies should be pursued in the light of the deteriorating environment described in Chapter 4.

More emphasis should also be placed on the enforcement or monitoring aspects. It is generally accepted that enforcement of environmental laws has always been lax due largely to neglect on the part of the officials concerned. The penalty prescribed by the law is always too lenient, in both penal and deterrent terms, being only a small fine in most cases.[13] Thus, offenders find it remain profitable for them to pay the fine and carry on with their business, the fine being in effect treated as a licence to pollute The NEQA seeks to remedy both these weaknesses. It gives more powers to monitor and enforce environmental standards to pollution control officials (defined by the Act as persons appointed by the Minister to control pollution according to the Act, i.e. officials from MOSTE).[14] The Act provides that operators of point sources must keep daily records of the performance of their waste treatment facilities or air pollution control equipment and prepare a report at least once a month to be submitted to officials in the localities where the sources are located.[15] The local officials concerned must process the monthly reports and submit them ,together with their comments, to the pollution

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[13] For instance, under the Public Health Act of 1941 (abolished by the Public Health Act of 1992), local government authorities had the duty to remove, prohibit, and abate public and private nuisances "which tend to impair or are likely to be prejudicial to the health, safety, or right and liberty of the public". This provision could provide a legal basis for local authorities to control various kinds of pollution, including air, water pollution, as well as disposal of waste Unfortunately, this power was rarely exercised by local officials, who claimed that fines imposed by the Act are too low to deter offenders. Under the 1992 Public Health Act, the monetary penalties remain relatively low. For example, the penalty for failing to comply with a local officials' order to refrain from committing an offence or to prevent a nuisance being caused by the offender is one month imprisonment or a fine not exceeding two thousand baht (£50), or both.

[14] NEQA 1992, Section 4

[15] *Ibid*, Section 80

control officials in charge of their localities.[16] In enforcing the laws, pollution control officials have, *inter alia*, powers of entry into industrial premises or other point sources, and of issuing orders to operators to comply with the laws, fining operators (except in the case where the point source is an industrial plant), and issuing written notification to officials responsible for industrial plants (i e. DIW officials) requiring them to fine the offending operators within a specified time.[17] It is important to note that where a notification is issued to DIW officials to fine operators and this is not done, the pollution control officials have the power themselves to issue a fine order In other words, the Act entrusts pollution control officials with the power to oversee proper observance of the laws and to fill the gaps where enforcement is lax. On the same basis, pollution control officials can recommend to responsible officials various enforcement measures such as closure, suspension, revocation of licence, and issuance of injunctive orders to stop operation of industrial plants which have violated laws on emission control. They may also recommend that legal proceedings be commenced against operators of those plants, although the law does not expressly authorise the pollution control officials themselves to take these actions.[18]

The fact that the NEQA 1992 gives extensive powers to pollution control officials to ensure that environmental regulations are complied with may not have so much impact on enforcement efficiency as anticipated. According to the two Notifications of MOSTE appointing pollution control officials, these officials are the Provincial Governor of each province, district officers, directors and chiefs of NEB's regional offices.[19] Provincial Governors and district officers are officials appointed by the Ministry of Interior to oversee and supervise local administration in the country's various regions. Even without the Act, they possess extensive law enforcement powers

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[16] *Ibid*, Section 81 In this respect, the Act has the effect of centralizing environmental control The MOSTE's policy is to set up its provincial offices in every province, it has done so in some major cities such as Chiang Mai

[17] *Ibid*, Section 82

[18] *Ibid*, Section 83

[19] Royal Government Gazette, Vol 110, Part 92, 13 July, B E 2536 (1993), 10

including those concerning environmental laws. The effectiveness of their performance of this function has always rested on their discretion and on policies laid down at a superior level; the result has so far been unimpressive. In this respect, the NEQA 1992 has hardly, if at all, brought about any changes promoting better environmental law enforcement. The only new element is, therefore, the involvement of directors and chiefs of NEB's regional offices in the provincial areas. So far, NEB has managed to set up only a few regional offices in major cities such as Chiang Mai due to a lack of human resources. Their presence is hardly noticed at present. Whether or not this will bring about any positive developments remains to be seen.

As far as penalties for violation of the law are concerned, the Act has increased these both in terms of the amount of fines and length of the terms of imprisonment imposed Apart from a heavy fine, set at a level four times higher than the normal cost or charge of waste treatment, for evasions of the law and establishing strict liability for damage caused by an escape of pollution, the Act also imposes severe penalties for trespassing and occupying public land, causing damage or loss of natural resources, and causing pollution affecting the environment in protection zones.[20] The maximum sentence for these offences is as high as five years' imprisonment or a fine of five hundred thousand baht or both. Some incentives for operators to instal waste treatment facilities are provided, such as exemption from import duties on machines or other necessary equipment for the purpose of installing waste treatment system not available within the country, and exemption from income tax for foreign experts employed to instal and supervise such systems.[21] As a provisional measure, the Act provides that all Ministerial Regulations and Notifications issued under the NEQA 1975 will remain in force in so far as they are consistent with the present Act and until new Regulations and Notifications are issued.[22] This would help to fill in the gaps in the interim until

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[20] *Ibid*, Section 99
[21] *Ibid*, Section 94
[22] *Ibid*, Section 113

MOSTE issues Regulations and Notifications to cover all point sources and all types of pollution.

2. The Factory Act, 1992

Another statute which is directly relevant to air pollution is the Factory Act of 1992 [23] The Act replaced the Factory Act of 1969 and introduced several changes, some of which are difficult to perceive as contributing to better environmental management It defines a factory as premises which utilise a machine or machines with capacity from five horsepower upwards or which employ at least seven workers.[24] This has the effect of reducing the number of factories falling under the Act by about 20 percent.[25] Furthermore, the Act classifies factories into three categories. The first category comprises those factories - defined by a subsequent Ministerial Regulation as those employing a machine or machines with a capacity of not more than 20 horsepowers or not more than 20 workers - which are considered to present no pollution problems These factories can start operation without applying for a licence, or even notifying the DIW. The second category comprises those factories employing a machine or machines with a capacity of not more than 50 horsepower or not more than 50 workers. These factories are deemed to present few pollution problems, and thus can operate without a licence but they would need to notify the DIW before starting operations. The last category consists of factories employing a machine or machines with a capacity of over 50 horsepower or more than 50 workers These factories have to apply for a licence prior to commencing operation [26] It is obvious that this redefinition and reclassification of factories will have the result of narrowing the DIW's control over industrial plants by excluding a vast number of factories previously under legal control. In effect, only the

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[23] The 1992 Factory Act, Royal Government Gazette, Vol 109, Part 44, 9 April, B E 2535 (1992), 62.

[24] *Ibid*, Section 5

[25] Compare this with the old Act which covered factories using engines with a capacity from two horsepowers

[26] Ministerial Regulation No 1 of the MOI, B E. 2535 (1992), Royal Government Gazette, Vol 109, Part 108, 16 October B E 2535

last category of factories, i e. big industrial plants, will now fall within the scope of the law. The rationale of the legislation is clear. It seeks to facilitate industrial development through simplifying procedures for licensing, making it more convenient for small and medium-sized factories to carry on their business. This is a curious development considering that one would expect tighter controls over industrial plants at a time of growing environmental awareness. For the time being, it is not clear whether MOSTE's determination of "controlled point sources" will correspond with this classification by the MOI. However, this is unlikely to make a difference to the existing situation where, as pointed out earlier, supervision and control of industrial plants will be left almost exclusively to DIW. If so, this will have an important impact on emission control of industrial plants as point sources. As, in provisions which seem to be in line with the Act's objective of loosening controls, the Act also extends the term of each licence from two years, as previously provided under the old Act, to five years, it may be argued that this development is unsatisfactory since factory licensing has always been considered an effective tool to force industrial operators to comply with laws Indeed, there had been a suggestion that operators should be required to apply for an annual licence. This proposal is unrealistic, however, given the limited manpower and budget of the DIW. Yet, it can be argued that extension of licensing periods will have negative effects as far as effective law enforcement is concerned. Although the Act authorises DIW officials to suspend or revoke licences when laws are breached, it is common knowledge that this power has hardly ever been exercised, even under the old legislation.

It is worth noting that in cases where factories falling within the second or the third category are located within industrial estates, they would fall within the control of the Industrial Estate Authority of Thailand (IEAT) and thus neither need to notify nor to apply for a licence from the DIW, although these factories still have to comply with

rules and regulations set by the DIW [27] Their exclusion from the supervision of the DIW makes IEAT an important body for overseeing that environmental regulations are complied with. The performance of IEAT in exercising control over industrial plants located within industrial estates has so far been inadequate [28]

Under the Act, the Minister of the MOI is given the power to issue regulations concerning the environment and safety of industrial plants. These include, *inter alia*, locations, environmental conditions and building structures of industrial plants, conditions concerning knowledge of workers operating the plants; safety procedures at work; and the setting of emission standards, as well as the means for controlling pollution discharged from operations [29] The power to set emission standards probably overlaps with the power of the Minister of MOSTE to set emission standards from point sources as authorized by NEQA 1992. This overlap may be due to a lack of coordination between the drafters of these two separate Acts, or may be intentional, given the MOI's desire to reserve its domain to itself.

A completely new innovative provision in the Act is that it allows qualified private persons to conduct supervisions and to prepare a report about a particular factory operation instead of restricting this function to DIW officials as previously.[30] The eligibility of private persons to carry out such functions is determined according to MOI's regulations, which normally include qualified engineers Persons who submit fraudulent reports are personally liable, the maximum sentence being two years' imprisonment or a fine not exceeding two hundred thousand baht or both [31] The involvement of the private sector in factory supervision is probably due to the realization that the DIW lacks the necessary resources to conduct all the work itself.[32] Viewed

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[27] *supra*, note 23, Section 30.
[28] See Chapter 9, and *supra* note 11
[29] *supra*, note 23, Section 8
[30] *Ibid*, Section 9
[31] *Ibid*, Section 47.
[32] In 1989, the DIW had 699 members of staff who were responsible for over 500,000 factories

positively, this provision may be a way of improving efficiency in factory control However, there remains the problem of ensuring that professionals engaged in supervision will not compromise environmental interests for economic gain. However, given the unimpressive performance of the DIW in executing this task so far, this option presents an attractive alternative. In this respect, relying on professional bodies, such as the Engineering Society of Thailand, to control the standard of supervision and reports may help to strengthen the process.

For the purpose of preserving economic interest, environmental conservation and public security, the Minister of MOI is given the power to issue Regulations or Notifications concerning the number and size of each category of factory which is allowed to be situated in any particular locality.[33] He may also determine the type, quality, proportion and sources of raw materials, as well as *the type of energy to be used in the production process* (emphasis added).[34] The power to determine the type of energy to be used in an industrial plant is a potentially powerful tool for promoting the use of less polluting fuel at the stage of first licensing of the factory provided that there is the political will to use it. It can be used to influence a switch from lignite and coal to sources of fuel which have less impact on air quality and it is best if operators can integrate this into their planning decision at the early stage of applying for a licence. If the trend to use more lignite and coal is allowed to continue, it will be more costly to reverse it later.

The Act grants extensive powers to officials (not defined by the Act, though presumably they would include the DIW's officials, as well as MOSTE's pollution control officials)

The Divisions which are particularly relevant to control of pollution from factories are the Industrial Control Division, Industrial Inspection Division, Industrial Environment Division, Office of Hazardous Substances and Office of Industrial service and Waste Treatment The number of staff in these Divisions was 153, 89, 114, 40 and 29 respectively, see Kritiporn, **Greening of Thai Industry**, *supra*, chap 4, note 6, pp 90-91.

[33] Factory Act 1992, Section 32 (1)

[34] *Ibid*, Section 32 (2)

in enforcing the laws. They may, *inter alia*, enter industrial premises or vehicles, collect product samples for testing, inspect, search, detain, seize or confiscate related items or even arrest a person suspected of violating the Act.[35] They can also issue an injunctive order requiring a person violating the Act to stop their activities, including suspending operation of machines, or remedying the situation within a specified time.[36] A wilful defiance of such orders could result in an order issued by the MOI's Permanent Secretary to close the plants concerned altogether.[37] Furthermore, where the violation can lead to environmental harm, the Government can take actions to mitigate the damage by using the Environmental Fund set up under NEQA 1992 The operator in breach has to reimburse the Fund for the amount expended.[38] Architects or engineers working in industrial plants violating the Act are deemed to be accomplices in the offences for the part of the work for which they are responsible and are liable to the same penalty as the operators unless they can prove that they had no knowledge of or did not consent to such wrongdoing [39] Interestingly, the Act provides that where there is an offence committed under this Act, persons living "close to" or "adjoining" the factories concerned, or persons affected by the offence are considered to be the victims or injured parties within the meaning of the criminal procedural law.[40] This means that such persons can bring a criminal action under Thai law against the offending operators. To date, no test case has been brought under this section However, the legal standing to bring a civil action remains limited and proof of damage is required

3. The Hazardous Substances Act, 1992

Although the Hazardous Substances Act of 1992[41] is not directly concerned with air pollution control, it has relevance in controlling ODSs The DIW is the main

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35 *Ibid*, Sections 35-36
36 *Ibid*, Section 37.
37 *Ibid*, Section 39
38 *Ibid*, Section 42
39 *Ibid*, Section 61
40 *Ibid*, Section 64
41 The Hazardous Substances Act, B E 2535, Royal Government Gazette, Vol 109, Part 39, 6 April B E 2535 (1992), 21

Governmental agency assigned to control the use of ODSs. No specific legislation on the control of ODSs has been enacted but the monitoring and control of their use was, prior to 1992, based on the 1967 Toxic Substances Act, and, since 1992, has been based on the Hazardous Substances Act which replaced the former Act. It is worth noting that as far back as 1981, the use of CFCs as propellants in aerosol sprays, such as those used as insecticides, hair sprays, and air fresheners, was already prohibited by the Ministry of Public Health acting under the former Toxic Substances Act.[42] Under the Hazardous Substances Act, hazardous substances are defined as including 10 categories of substances. These include, *inter alia*, explosive, inflammable, oxidising, toxic and radioactive substances The last category listed by the Act is an open-ended one, encompassing all other substances, whether chemical products or not, which may endanger humans, animals, plants or the environment.[43] It is this provision which enables the DIW to classify ODSs as hazardous substances subject to legislative control under the Act.

The Act created a Committee on Hazardous Substances chaired by the Permanent Secretary of MOI. The Committee consists of 25 members, most of whom are heads of the governmental agencies concerned and not more than seven of whom are experts to be appointed by the Cabinet.[44] It has an advisory role in recommending various measures for the control of hazardous substances.[45] A data base on hazardous substances is to be set up at the MOI.[46] According to Section 18 (2), the Minister of MOI, with the advice of the Committee, can issue Ministerial Notifications which list names or properties, and the types of hazardous substances to be regulated, including the period of time of such regulation and identify the governmental agency responsible for monitoring such controls Hazardous substances are further classified into four types

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[42] Notification of the Ministry of Public Health (No 26), B E 2524, Royal Government Gazette, Vol 98, Part 177, 27 October, B E 2524 (1981)
[43] The 1992 Hazardous Substances Act, Section 4.
[44] *Ibid*, Section 6
[45] *Ibid*, Section 7
[46] *Ibid*, Section 17

according to the degree of danger they pose and thus the degree of control needed [47] The first type comprises substances whose production, import, export and possession needs no notification to governmental agencies though some regulations and procedures must be observed. The second type needs prior notification as well as observance of certain regulations and procedures. The third type consists of those substances which require a permit for their production, import, export or possession. Lastly, the fourth type are substances the production, import, export and possession of which is totally forbidden.[48] Under the new Act, ODSs will fall within the third type of substances

In December, 1989, an MOI Ministerial Notification listed the eight controlled ODSs covered by the Montreal Protocol as controlled substances under the 1967 Toxic Substances Act [49] The ten fully halogenated CFCs listed in Annex B and HCFCs listed in Annex C of the London Amendments were further listed in July, 1991 [50] Importers are required to register with the DIW and apply for an import permit, specifying the types, quantity and intended use of the ODSs After the shipment has been landed, the importer must file a declaration stating the exact quantity of imported ODSs [51] In addition, the DIW has adopted a policy of not allowing new companies to import ODSs unless they already have a factory operating licence [52]

Although it has been admitted that accurate import data on ODSs are difficult to obtain due to the incomplete records kept by the Customs Department and the DIW,[53] the

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[47] *Ibid*, Section 18.
[48] *Ibid*
[49] Notification of the MOI (No 51) B E 2532, Royal Government Gazette, Vol 106, Part 215, 5 December B E 2532 (1989), p 9138
[50] Notification of the MOI (No 59) B E 2534, Royal Government Gazette, Vol 108, Part 157, 5 September B E 2534 (1991), p 8587
[51] Ministerial Regulation of the MOI, B E 2537, Royal Government Gazette, Vol. 111, Part 51 Kor, 16 November B E 2537 (1994), p 60
[52] Kaosa-ard and Eamsakulrat, *Trade VS Environment, supra*, Chapter 4, note 59, p 12
[53] **Phaseout of ODS in Thailand**, *supra*, Chapter 4, note 48, p 2-4, where it is stated that there is no centralized import data at the Customs Department from which accurate assessment can be made, whereas the data from the DIW are more detailed but have only been collected from 1990 Furthermore, the data from both sources are based only on bulk imports and exports of the

policies of and responses from industry indicate that Thailand is moving towards the phasing out of ODSs The DIW has entered into an agreement with the U S Environmental Protection Agency and the Japanese Ministry of International Trade and Industry (MITI) to encourage multinational companies in those two countries to phase out the use of ODSs as solvents by their subsidiary companies based in Thailand, as they have already done in their main operations back home [54] Many U.S and Japanese firms have announced that they will accelerate the phase-out of ODSs in their Thai operations [55] Most electronic and metal cleaning industries have indicated their plans to stop using CFC-113 and 1,1,1-trichloroethane by the end of this decade [56] Moreover, as pointed out in Chapter 4, around US$ 13.4 million have been granted to Thailand from the Montreal Protocol's Multilateral Fund to speed up the phasing out process.

The need to develop supporting policies for the phasing out of ODS has also been strongly recommended According to a country study conducted for the DIW, several recommendations have been made These include, *inter alia*, the cessation of awarding promotional privileges to new ODS-consuming industries, the setting up of a special unit in DIW to deal with ODS phaseout activities, the removal of import duties on ODS recycling equipment, alternative technologies and chemical substitutes, the banning of the import of building chillers which can only use CFC-11 or CFC-12, requiring remaining aerosol manufacturers to use available alternatives, and banning the use of CFC-12 in polystyrene foams, CFC-11 in flexible polyurethane foams and CFC-11 in rigid insulating foams [57] In any case, it is generally agreed that it is in Thailand's economic interest to maintain the country's competitiveness as export markets will increasingly demand ODS-free products and the availability of ODSs for production purposes will diminish. The early restructuring of industries would be less costly than

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substances, excluding those already assembled or contained in products such as hand-held fire extinguishers

[54] *Ibid*, p 6-2

[55] *Ibid*

[56] *Ibid*, p 6-4

[57] *Ibid*, p 9-2

delaying actions leading eventually to the forced premature retirement of machinery As mentioned above, this trend is reinforced by the decision taken by most multinational companies with subsidiaries based in Thailand to phase out the use of ODSs With the reduction of ODSs driven largely by economic considerations, there should be little resistance to implementation of the Montreal Protocol Interviews conducted with some academics and environmentalists in Thailand yielded the impression that the phasing out of ODSs is not regarded as a major problem because most laws and policies for the issue are now quite firmly in place. However, there is still room for improving the laws to help to accelerate the phase-out of ODSs. For instance, a quantitative target for reduction in consumption could be set and introduction of a system of import quotas for various companies, as in the European Union, would make the controlling and monitoring of imports of ODSs more effective.

4. Related legislation

Other legislation deals indirectly with air pollution Relevant statutes are the Public Health Act of 1992[58] and the Promotion of Energy Conservation Act of 1992.[59] The Public Health Act lists various incidents which can be regarded as a public nuisance Among them is any action causing a smell, light, radiation, heat, toxic substances, vibration, dust, fallout, soot, ashes or other effects which may endanger health.[60] Local officials are authorised to prohibit persons from causing such nuisances in public or private places and to terminate the nuisances [61] They may issue a written order to such person or persons to stop or prevent within a specified time actions causing a nuisance, and if this is not complied with, they may take appropriate measures to eliminate the nuisance [62] In such circumstances, the persons causing the nuisance are held responsible for any expenses incurred.[63]

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[58] Royal Government Gazette, Vol 109, Part 38, 5 April, B E.2535 (1992)
[59] Royal Government Gazette, Vol 109, Part 33, 2 April, B E 2535 (1992), 1.
[60] 1992 Public Health Act, Section 25 (4).
[61] *Ibid*, Section 26
[62] *Ibid*, Section 27
[63] *Ibid*

The Promotion of Energy Conservation Act is aimed at improving energy efficiency and reducing energy consumption and thus mitigating air pollution problems The Act applies to factories and buildings which have transformers with the capacity from 1,000 kilowatts or 1,175 kilovolts-amperes upwards, or which, from 1 January to 31 December of the past year, consume energy equivalent to at least 20 million megajoules [64] Owners of these controlled buildings are given three years to meet conservation requirements, otherwise special fees will be charged on electricity or energy consumed if the conservation measures under the Act are not complied with.[65] Measures required to be taken include, *inter alia*, general measures to reduce energy use and to increase energy efficiency, conducting energy audits in factories, setting conservation goals and submitting a conservation plan to the Government for approval.[66] The Department of Energy Affairs is authorized to issue regulations governing the minimum efficiency of machinery, equipment appliances, building materials, control systems and other related items.[67] An Energy Conservation Promotion Fund is to be set up to finance energy efficiency and renewable energy projects and other related environmental activities, which may include promotion of education, energy conservation demonstration projects, monitoring, research and development and policy planning [68]

5. Conclusions

The preceding analysis of Thai laws relating to air pollution control reveals the following problems in the implementation of the necessary control measures :

(1) Although the NEQA 1992 has established a comprehensive framework for environmental management, the administration and monitoring of laws and standards remains fragmented Enforcement of and improved efficiency in environmental control

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[64] Royal Decree designating controlled buildings, Royal Government Gazette, Vol 112, Part 33 Kor, 14 August B E 2538 (1995), p 8 The Decree came into force on 12 December 1995

[65] Section 42

[66] See for examples, Sections 7, 16, 17 and 21

[67] Sections 19 and 23

[68] Sections 24-26

fall far short of the aims envisaged by the Act. Despite the institutional reforms introduced by the law, resulting in the elevation of the NEB and the creation of the three new Departments within the MOSTE authorized to deal specifically with pollution and planning, little has changed in substance. New regulations purportedly setting new emission standards under the Act are still based mostly on standards existing long before the Act even though these standards are relatively much lower than those in developed countries.

(2) The Factory Act, which was passed in the same year as the 1992 NEQA, may present problems because it aims to promote industrial development, rather than stricter control over emissions from industrial plants Instead of rectifying the problem of insufficiency of resources to effectively enforce the laws, the Act has the effect of exempting from its control smaller industrial plants (with machines below 50 horsepower or employing not more than 50 people). Although medium-sized factories (20-horsepower machines or no more than 20 workers) have an obligation to notify, this amounts to no more than a formal procedure with little actual control exercised in practice, considering the unimpressive performance of the DIW in the past in enforcing standards. One could argue that it is the smaller plants which are more likely to violate emission standards because they have little capital and need to minimise costs, which will tend to encourage breaches of the law. The involvement of private individuals, such as qualified architects or engineers, in the supervision of standards, and the extension of each licence to a period of five years, more than doubling the period set under the old Act, will further loosen the DIW's control over factories These provisions of the Factory Act clearly indicate the priority given to economic development over environmental considerations in making it easier for industrial plants to carry on their activities.

(3) More environmental concern has certainly been evidenced by the public, especially as far as air quality in the urban areas is concerned. Although the Government has taken

several measures to reduce air pollution from petrol used by cars, such as by imposing the complete ban on the use of leaded gasoline, reducing sulphur content in diesel oil, and requiring catalytic converters, these measures will have little impact on the reduction of air pollution from the transportation sector.[69] This is because the number of vehicles in use is increasing all the time in the absence of an adequate and efficient mass transit system. It has been estimated that over 400 new cars are brought on to the roads in Bangkok each day. As the high price of new cars puts them beyond the means of many, even middle income groups keep old cars, which cause more pollution, on the road It is predictable therefore that air quality will continue to deteriorate despite the efforts which have been made to improve it.

(4) In view of the rapidly growing demand for electricity, the trend towards making lignite an increasingly important source of fuel is a worrying one. There is a danger that Thailand and its developing neighbour States in Asia are repeating the experience of developed countries in Europe and North America by paying as the price of economic development, the degradation of their air quality Problems of acid rain are imminent, as indicated by the cases of Mah Moh power plants, although their wider regional implications are still not clear. It is desirable that some international agreements should be developed requiring States to establish control over emissions before the problems become as serious as they are in developed countries, i e. to apply the precautionary principle as required by Agenda 21 and the Rio Declaration of UNCED.

(5) If more industrial plants convert their boilers to the use of coal and lignite as predicted, this will have further adverse impacts on air pollution As with other forms of waste, such as sewage and hazardous waste, the DIW has not exercised effective control

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[69] There are some positive reports from the Pollution Control Department that lead poisoning from air pollution is declining with the increased use of unleaded petrol in Bangkok See for example, *Unleaded Petrol Cuts Level of Lead Poisoning, supra*, Chapter 4, note 78 Studies by doctors at Ramathibodi Hospital show that the average lead level in newborn babies is not as high as it was before unleaded petrol was introduced

over air emissions from industrial plants and it is unlikely to do so in the future. In fact, a contrary trend can be predicted in the light of the new Factory Act Likewise, the IEAT has not had a good record in monitoring industrial plants within industrial estates. As Thailand is becoming more and more industrialised, it is essential that the laws for controlling industrial plants be strengthened.

(6) Despite the increasing importance attached to the role of the three Departments of the MOSTE in environmental management, the performance of the MOSTE in environmental control since the 1992 overhaul of environmental legislation has been problematic. Little has been done to change from the exercise of their routine functions as they existed before the NEQA 1992, especially as regards their maintenance of lax standards in air pollution control, although more stringent air quality standards are currently being considered More active policies of this kind must be pursued if environmental considerations are really to be put on the same footing as developmental ones as required for sustainable development and, more specifically, as required by UNCED's Agenda 21. Furthermore, with more power accorded to MOSTE by the new legislation, a more active role should be taken by MOSTE officials in enforcing environmental laws. Unfortunately what has been done so far seems rather to evidence complacency in relation to continuation of *status quo*, i e letting respective governmental agencies merely continue to act as they used to do.

CHAPTER 6

THE CONSERVATION OF BIOLOGICAL DIVERSITY IN THAILAND

1. Introduction

Most of the legislation concerned with biological diversity in Thailand deals with protection of forests and forest products. The only law specifically relates to the protection of species is the recent Wild Animals Conservation Act.[1] The relevant legislation in this area is as follows:

(1) The Forest Act, 1941 as amended.[2]

(2) The National Forest Reserve Act, 1964 as amended.[3]

(3) The National Park Act, 1961 as amended in 1989 [4]

(4) The Wild Animals Conservation and Protection Act, 1992.[5]

(5) The Seed Act, 1975 as amended in 1992.[6]

(6) The Fishery Act, 1947.[7]

2. The Forest Act, 1941 as amended.

The objectives of this Act were not expressly stated. It replaced all pre-existing laws governing logging and harvesting of forest products. As in other forest legislation,

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[1] The Wild Animals Conservation and Protection Acts of 1960 and 1992 are often cited as the Wildlife Conservation Act However, the laws contained in both Acts deal only with wild animals. In order to avoid confusion, as the term "wildlife" has been generally understood to refer to both animals and plants, it is preferable to refer to the Acts as the Wild Animals Conservation Act

[2] The Forest Act, B E 2484 (1941), Royal Government Gazette, Vol 58, Part 73, 15 October, B E 2484 This Act has been substantially amended nine times in 1948, 1951, 1959, 1960, 1972, 1975, 1979, 1982 and 1989

[3] The National Forest Reserve Act B E 2507 (1964), Royal Government Gazette, Vol 81, Part 38, 28 April B E.2507 It has subsequently been amended twice in 1979 and 1985

[4] The National Parks Act, B E 2504, Royal Government Gazette, Vol 78, Part 80, 3 October B E 2504 It has been amended once, in 1989.

[5] The Wild Animals Conservation and Protection Act, B E 2535 (1992), Royal Government Gazette, Vol 109, Part 15, 28 February B E 2535

[6] The Seeds Act, B E 2518 (1975), Royal government Gazette, Vol 92, Part 40, 19 February B E.2518 It was substantially amended in 1992 by the Seeds Act B E.2535, Royal Government Gazette, Vol 109, Part 40, 7 April B E 2535.

[7] Royal Government Gazette, Vol 68, Part 3, 14 January, B E.2490 (1947)

forest is defined as "all land which has not been acquired by any person in accordance with land law".[8] Forest products are defined as all things which occur naturally in the forests, namely wood, including parts thereof, charcoal, wood oil, wood rubber and other things which emanate from wood, various plants including all things emanating from plants; bird nests, lac, honey-combs, honey, honey wax and faeces of bats, and rocks which are not minerals according to the Minerals Act.[9] In essence the law regulates logging, the harvesting of forest products, the royalties to be paid to the Government, and the processing, transporting and marking of logs Woods subject to the legal control laid down in the Act are classified into "normally prohibited woods" and "strictly prohibited woods", the latter being rare and reserved woods in which no logging is allowed, except by special permission from the Minister (of the Ministry of Agriculture and Co-operatives).[10] The first category consists of teak and rubber wood, the harvesting of which needs permission from authorized officials (of the Royal Forest Department or RFD) or concessions granted according to the Act. The classification of all other types of woods is to be done by issue of a Royal Decree.[11] The Act prohibits logging without prior official permission and the payment of appropriate royalties [12] Exceptions are made in cases where logging is done by government officials for the purposes of maintaining the forests or for academic research, and where persons collect pieces of wood, dead woods which are not teak or other prohibited woods, to be used as firewood [13] Section 27 authorizes the Minister to enact Royal Decrees to determine forest products or items to be regarded as "prohibited forest products". Any person picking or harvesting or doing any acts endangering prohibited forest products must acquire prior permission and pay appropriate royalties as specified in a Ministerial Regulation or in the permit [14] No person is allowed to possess forest products

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[8] The Forest Act, Section 4 (1)
[9] *Ibid*, Section 4 (7)
[10] *Ibid*, Section 6
[11] *Ibid*, Section 7
[12] *Ibid*, Sections 12-14
[13] *Ibid*, Section 17
[14] *Ibid*, Section 29

exceeding the amount specified in a Ministerial Notification except with prior official permission.[15] In relation to collection of honey combs, it is prohibited in any circumstances to fell or endanger the trees in which honey combs are located [16] Most of the other provisions deal with matters concerning logging, such as marking and transporting of logs,[17] control of timber processing,[18] and prohibition of forest clearing [19] The Act imposes criminal penalties, the heaviest being five years imprisonment or a fine of fifty thousand baht or both.[20]

Up to 1987, prior to the logging ban, there were 158 types of timber which were classified as "normally prohibited woods" and 13 as "strictly prohibited woods".[21] Despite its expansive control over logging, the Act has had little effect on the control of deforestation, as evidenced by the massive reduction of the country's forest cover from nearly 50 percent of total land area to about 26-28 percent during 1973 and 1988 [22] As a result of the logging ban in Thailand since 1989,[23] provisions on the control of

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15 *Ibid*, Section 29 bis
16 *Ibid*, Section 31
17 *Ibid*, Sections 34-37
18 *Ibid*, Sections 38-53
19 *Ibid*, Sections 54-55
20 *Ibid*, Sections 69-74
21 Royal Decree specifying prohibited woods, Royal government Gazette, Vol 104, Part 220, 2 November B E 2530
22 See the National Identity Board, **Thailand in the 90's**, Office of the Prime Minister, Royal Thai Government, 1991, pp 116-7. A 1988 satellite photo survey showed that the forest areas in Thailand had diminished to only 14 38 million hectares or about 28 03% of the country's total land area Estimated deforestation claimed about 7 8 million hectares, or an average of 487,500 hectares per year
23 The Royal Executive Decree amending the Forest Act, B E 2532 (1989) As a result of this Decree, all logging concessions, which had been granted prior to the Decree and which had a whole or a part of their concession areas in designated national parks, were deemed to terminate and concessionaires were entitled to claim compensation for the damage they suffered as a result of such termination The Constitution gives power to the Executive to enact an Executive Decree in emergency circumstances when Parliament is not in session Such decree will enter into force as soon as enacted but it would have to be submitted to Parliament at its next session for approval It would normally obtain approval because the Government commands a majority in the House of Representatives If not, there would be serious political implications and the Government would have either to dissolve Parliament or resign The Decree to ban logging followed a flooding disaster in Southern Thailand in November, 1989 causing great loss of life and property The flood brought down from uplands a vast number of illegally felled logs which aggravated the damage to life and property It was proved that the damage was greater

logging remain relevant to logging in economic forests and to regulating harvesting of forest products According to the latest Royal Decree specifying the types of forest products controlled by the law,[24] there are now 18 main types of regulated forest products. These include all species of wild orchids, resin, various kinds of tree barks, wood oil, palm leaves, charcoal, various kinds of tree rubbers, and all kinds of rattan A certain amount of prohibited forest products is allowed to be taken for household use.[25]

Thus, legally speaking, no logging is now allowed in Thailand However, illegal logging is still going on and deforestation continues for reasons discussed earlier Chapter 4 Although the rate of deforestation has fallen since 1989, this is probably due to the decline in the agricultural sector, exacerbated by the move of the population from the countryside to the towns and cities, and thus the reduced need to clear forest lands for farming, rather than to the logging ban. The problems concerning illegal logging do not lie so much in the weakness of the substantive laws as in insufficient enforcement of the existing laws. It is evident that the RFD has almost completely failed to stop deforestation, largely through inadequate manpower to monitor the forests There are often allegations of corruption against the officials concerned.[26] Furthermore, as stated earlier in Chapter 4, deforestation in Thailand is closely associated with poverty. It is questionable, therefore, whether there is really a place for law enforcement unless the poverty problems are tackled first.

Apart from the failure to stop illegal logging and deforestation at home, another

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than it should have been because of deforestation and soil erosion

[24] Royal Decree specifying forest products, B E.2530, Royal Government Gazette, Ibid

[25] See Notification of the Ministry of Agriculture and Cooperatives, B E 2531 (1988), Royal Government Gazette, Vol 105, Part 35, 4 March B E 2531

[26] For accounts of illegal logging in Thailand and in other Asia-Pacific countries, see D J Callister, **Illegal Tropical Timber Trade : Asia-Pacific**, TRAFFIC International and WWF, Cambridge, U.K., 1992 Illicit logging is said to be "one of the biggest problems of the Thai parks system, arising through a combination of poverty, corruption and inadequate policing". It is alleged that illegal logging may have increased since the logging ban in Thailand, and that the logging ban has resulted in more logging in countries neighbouring Thailand, particularly in Myanmar; pp 43-8, and pp 67-72

worrying trend is that the majority of timber now being consumed and processed in Thailand is imported from neighbouring countries, especially Myanmar and Cambodia Due to internal conflicts, these countries have awarded logging concessions to Thai entrepreneurs in exchange for the money necessary to wage war against internal factions Their fertile forests are, therefore, being exploited without adequate consideration of the environmental impacts or the sustainability of their natural resources It is desirable that some effort at the regional or international level, or both, should be directed to these problems Even though it can be selfishly argued, as has been suggested by some entrepreneurs, that protection of natural resources is the sole domestic responsibility of the particular country concerned, deforestation in neighbouring countries will undoubtedly have environmental impacts on Thailand and on the global community as a whole It is difficult to envisage action at the regional level at present, given the still limited role played by the ASEAN in environmental affairs. At the international level, the ITTO should play a more active role in controlling unsustainable logging, including logging in neighbouring countries, by its Member Countries This is necessary if the ITTO is to achieve its target of having all tropical timber in international trade sourced from sustainably managed forests by the year 2000

3. The National Forest Reserve Act, 1964

This Act replaced three pre-existing pieces of legislation on the protection and preservation of forests enacted in 1938, 1953 and 1954. The Act stated that the previous legislation was inadequate to deal with forest encroachment because of the long procedure entailed in declaring a particular area to be a reserved or protected forest and the low penalty imposed by the law Again "forest" is defined to comprise all lands, including mountains, brooks, swamps, canals, marshes, riversides, streams, lakes, islands and coastal areas, which have not been acquired by persons in accordance with

law.[27] This kind of definition enables the Government to designate any area which has not legally been held by any person or designated as a national park or a wildlife sanctuary as an area of forest reserve. Theoretically, forest reserves should consist of natural forests which have not been declared as national parks or wildlife sanctuaries. In reality, however, the designation of forest reserves includes many areas which have been cleared and settled by villagers.[28] As a consequence, the designation of a forest reserve has often overlapped or covered areas already inhabited by village settlers, some of whom have been there for generations before the designation. Designation of a forest reserve has, therefore, caused much controversy especially with regard to the social impacts it has had on the rural people concerned and the conflicts over natural resources it has created, which eventually rendered the law ineffective. It has been estimated that at least one-third of the national forest reserves have been encroached upon and occupied by farmers [29] Although the Act makes provision for persons who are affected to submit a written petition to district officials in their areas within 90 days,[30] it is clear that many villagers would be unaware of the designation and fail to object in time

According to the Act, all forest reserve which had been designated before the Act came into force will continue to be forest reserve areas The Minister of Agriculture and Cooperatives has the power to designate additional areas as forest reserve by issuing Ministerial Regulations with maps indicating the boundaries of such areas attached.[31] Each designated forest reserve area will be administered by a five-member Forest Reserve Committee comprising a representative from the RFD, the Department of Local Administration, the Land Department and another two committee members to be appointed by the Minister.[32] In a forest reserve area, it is prohibited for any person to

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[27] The Forest Reserve Act, 1964, Section 4
[28] Until 1991, areas of forest reserves have been designated by over one thousand Ministerial Regulations covering about 144 million rai (23 million hectares)
[29] Panayotou and Parasuk, **Land and Forest...**, *supra*, Chapter 4, note 17, p 63
[30] *supra*, note 27, Section 12
[31] *Ibid*, Section 6
[32] *Ibid*, Section 10

occupy, exploit or live on the land, clear, burn, cut trees, collect forest products or commit any other acts which are injurious to the conditions of the forest reserve area, except where a permit is given by authorized officials or where permission is given on any individual occasion.[33] Where a whole or part of a designated forest reserve has degraded to the extent that it is difficult for it to be rehabilitated to its natural conditions, the Minister, with the approval of the Cabinet, may declare such an area to be "a degraded forest". Degraded forest areas can be further classified as an area of "forest reserve under improvement", in which case the Director-General of the RFD may allow persons inhabiting the area to continue living there, but no more than 20 rai (3 2 hectares) may be allocated to one household and such permission may be given for a term of not less than five years and not more than twenty years.[34] Such persons may also seek permission to grow forest or perennial trees in the areas allocated to them, and provided that the authorities are satisfied that they have the necessary capacity and equipment to do so, the Director-General may grant permission for them to plant such trees over an additional area not exceeding 35 rai (5.6 hectares) [35] The permission to occupy and exploit the forest area is not to be regarded as conferring any rights to such land although the persons concerned are exempted from paying royalties and forest maintenance fees for the exploitation of any trees planted by them.[36]

Although it seems logical to allow occupation and replanting of trees in degraded forest areas, it becomes controversial if permission is given over a larger area for reforestation efforts because such provision can easily be abused as a means of facilitating planting of commercial forests by private enterprises. In 1985, an Act was introduced to amend the National Forest Reserve Act and to authorise the Director-General, with authorisation from the Minister, to grant permission to any person or persons "to maintain the forest, or raise forest plantations or perennial trees in degraded forest areas" in accordance with

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[33] *Ibid*, Sections 14-15
[34] *Ibid*, Section 16 bis (3)(1)
[35] *Ibid*, Section 16 bis (3)(2)
[36] *Ibid*, Section 16 bis (4) and (5).

the terms and conditions specified in the respective licence, but if the area permitted exceeds 2,000 rai (320 hectares), Cabinet approval is required [37] The rationale behind this amendment was that the RFD did not have the ability to increase the targeted forest cover on its own, hence, the necessity to involve the private sector.

Amid the controversy concerning whether the engagement of the private sector in commercial forests could really be called a reforestation programme, the Forest Plantation Act was passed in 1992 to support this policy of promoting private forest plantation.[38] The objective of the Act is to promote commercial forestry According to the Act, a person granted permission to grow trees in a forest reserve area may apply to register the land as a "forest plantation" for the purpose of planting and maintaining trees which are "prohibited woods" as classified by the Forest Act.[39] The planter is entitled to exploit the trees by cutting, processing, trading, and transporting them through wood checking points [40] Before cutting the trees, the planter must first notify the authorised officials.[41] An interesting provision is that no royalties need be paid for woods harvested from commercial forest plantations [42]

Although it can be argued that individual farmers may apply to register a forest plantation if they so wish, in practice commercial forests are only profitable if carried out on big plantations [43] Furthermore, forest plantations in the past have been directed towards growing eucalyptus to supply wood for the pulp and paper industries and wood

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37 *Ibid*, Section 20
38 The Forest Plantation Act, B E 2535 (1992), Royal Government Gazette, Vol 109, Part 20, 13 March B E 2535
39 *Ibid*, Sections 5-7
40 *Ibid*, Section 10
41 *Ibid*, Section 11
42 *Ibid.*, Section 14
43 See Phantumvanit and Panayotou, **Natural Resources for a Sustainable Future**, *supra*, Chapter 4, note 21, p 34, they found that commercial forests can be profitable on large-scale or corporate plantations of over 1,000 rai (160 hectares) generating an annual income of 1,400 baht per rai In contrast, most small-scale farmers who own less than 100 rai (16 hectares) would earn only 204 baht per rai, an income substantially lower than the 500 baht earned from cassava growing

chips for export.[44] Such plantations are normally engaged in by big companies; local farmers view eucalyptus as plants which have adverse effects on their crops and soils [45] As it generates no clear environmental or social benefit, the granting of large areas for commercial forest plantations can be questioned as a means of sustainably managing forest reserves and the exemption of big companies engaged in forest plantation from paying royalties, coupled with the nominal fee charged by the RFD (10 baht per rai), can be viewed as socially unjust

4. The National Park Act, 1961

The National Park Act was the first to be enacted specifically to provide protection for wildlife species and natural habitats. The Act authorises the Government to designate any particular area that it deems to be an interesting natural environment worthy of preservation for educational and amenity purposes as a national park.[46] The designation, expansion or cancellation of a national park is to be done by Royal Decree.[47] The Act provides for the establishment of a fifteen-member National Park Committee, chaired by the Permanent Secretary of the Ministry of Agriculture, appointed to advise the Minister on matters concerning designation, protection and maintenance of national parks [48] The Act lists nineteen incidents which are prohibited in national parks and regarded as offences under the law. These are, *inter alia*, holding or occupying lands, clearing and burning of forests; collecting, taking away or endangering woods, wood oils, rubber oil, palm oil, minerals or other natural resources; taking away or endangering any animals; collecting, taking away or endangering orchids, honey, lac, charcoal, tree barks or faeces of bats; and collecting or endangering

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[44] *Ibid*, p 32

[45] *Ibid*; where it is stated that scientific research has shown that eucalyptus is only suitable for degraded areas and should be planted in small plots, blocked by other plant species, and that eucalyptus is known to reduce the water table and, affect neighbouring crops where moisture and nutrients are in short supply

[46] The National Parks Act, 1961, Section 6

[47] *Ibid*, Section 7

[48] *Ibid*, Section 15

flowers, tree leaves or fruits.[49] Officials of RFD possess the same power of arrest and suppression of offenders as do police officials in relation to other criminal offences [50] The maximum sentence under the Act is five years imprisonment or a fine not exceeding twenty thousand baht or both [51]

From 1962 to 1992, 77 national parks covering areas in 45 provinces have been established. The total area of these national parks is approximately 35,026,521 rai (5,604,243 hectares). On the whole, the law on national parks has not provoked much controversy except on the issue of inefficient monitoring of the areas as some of them may cover areas of over 1 million rai[52] which often makes it impossible comprehensively and effectively to supervise the areas to see that no prohibited acts are committed. It has been suggested that buffer zones should be created around protected areas, such as national parks, to make encroachment and poaching more difficult and to make the task of monitoring the boundaries easier for the understaffed responsible government agencies [53] This could be done by amending all the laws relating to establishment of protected areas to enable the governmental agencies concerned to designate buffer zones. In addition land use regulations should be imposed on private land and property within such zones.[54]

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[49] *Ibid*, Section 16
[50] *Ibid*, Section 20
[51] *Ibid*, Section 24
[52] An example is Khao Yai National Park which was Thailand's first national park, established in 1962. It encompasses an area which overlaps four provinces Although Khao Yai has been designated as an ASEAN Heritage Site, the number of wild animals therein still keeps decreasing and poaching is a normal phenomenon Another example is provided by the Huai Kha Khaeng - Thung Yai Wildlife Sanctuaries, which together have been listed as a world heritage site since 1991 Poaching is a big problem and it is normal to hear gunshots of poachers on the site at night
[53] P Tasneeyanond and D Nifosi, *Thailand Country Report*, in IUCN, **Legislation for the Implementation of the ASEAN Agreement on the Conservation of Nature and Natural Resources : Country Reports**, IUCN Environmental Law Programme, Bonn, April 1994, pp 203-238, at p 230.
[54] *Ibid* It should be added that at present only Huai Kha Khaeng Wild Animal Sanctuary, see note 52, has a buffer zone

5. The Wild Animals Conservation and Protection Act, 1992

The 1992 Wild Animals Conservation Act replaced the 1960 Wild Animals Conservation Act The main driving force for the promulgation of this Act was the necessity to enact domestic legislation to implement CITES.[55] Like the 1960 Act, the Act classifies wild animals into "reserved wild animals" and "protected wild animals".[56] A list of 15 reserved wild animals is provided in the Act.[57] These include, white-eyed river-martins, Javan rhinos, Sumatran rhinos, koupreys, wild water buffaloes, brow-antlered deers, Schomburgk's deers, serows, gorals, gurney's pittas, sarus cranes, marbled cats, tapirs, fea's barking deers, and dugongs. Subsequently, a Ministerial Regulation was enacted in 1994 to list species which are classified as "protected wild animals".[58] The Regulation divides protected species into 7 categories, i e. 189 species of mammals, 182 types and genera of birds covering 771 species, 63 types and genera of reptiles covering 91 species, 12 species of amphibians, 13 species of insects, 4 species of fish, and 13 species of crustacean. Compared to the number of protected species listed in the various Ministerial Regulations enacted under the old Act, this new Regulation does provide considerably more extensive coverage of species[59] A marked

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[55] Thailand ratified CITES on 21 January, 1983 It was the eightieth country to become a Party to the Convention However, it did not seriously implement the Convention and in fact, until 1992, it did not enact any domestic legislation specifically to implement its obligations under CITES As a result, on 22 April, 1991, the CITES Standing Committee recommended, through Notification to the Parties No 636, that a ban on trade in CITES specimens between CITES Parties and Thailand was to be imposed See Chapter 3, pp 129-130 At the Eighth Meeting of the COP, the CITES Standing Committee considered efforts made by the Thai Government to implement CITES regulations, including the enactment of legislation to protect wild fauna and flora, and decided unanimously that the ban on trade in CITES specimens with Thailand should be lifted On 2 April, 1992, the CITES Secretariat informed Parties that the previously recommended ban was lifted with immediate effect

[56] Under the 1960 Act, protected wild animals were further classified as first and second types of protected wild animals The first type are animals which are not game, and should be protected as destroyers of pests, or for amenity values The second type consisted of animals which are game A licence must be applied for, for hunting this second type of animals

[57] Compared to the nine species reserved under the 1960 Act, the new Act provides for wider protection

[58] Ministerial Regulation No 4 (B E 2537), Royal Government Gazette, Vol 111, Part 51 Gor, 16 November, B E 2537 (1994), 58

[59] There were at least 17 Ministerial Regulations enacted under the 1960 Act, listing some 44 families and species of mammals, 149 families and species of birds, 29 species of reptiles, 7 species of amphibians and one species of crustacean

improvement in the new Act, which has often been overlooked, is the strict prohibition on hunting of all species of reserved and protected wild animals. Although hunting of reserved species and some protected species was already forbidden under the old Act, until the enactment of the 1992 Act hunting of protected species which were game (the classified "second category of protected species" was allowed on obtaining a licence [60] The new Act has abolished the distinction made of protected wild animals. The complete ban on hunting of all reserved and protected species introduced by the Act is, therefore, to be commended although one would have some reservations concerning the effectiveness of implementation of these provisions.

Another important provision similar to the 1960 Act is that the new law gives power to the Cabinet to establish "wild animal sanctuaries" by issuing Royal Decrees with maps clearly designating the boundaries of such areas. In a wild animal sanctuary, hunting of wild animals, whether or not listed as reserved or protected species, is prohibited, as is collecting or endangering wildlife nests, except when the acts are done for educational or academic research and have been granted a written permission from the Director-General of RFD, *with approval from the National Wild Animals Conservation Committee* (emphasis added).[61] By 23 July, 1993, 36 wild animals sanctuaries covering a total area of 17,484,088 rai (2,797,454 hectares) had been established. These include the Huai Ka Kaeng and Tung Yai Naraesuan wild animals sanctuaries, together listed as a World Natural Heritage Site.

The National Wild Animals Conservation Committee possesses some features that distinguish it from that created under the old Act.[62] Instead of, as formerly, confining

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[60] According to the latest rate of licence fee as laid down by the Announcement of the Revolutionary Council, No 228, Royal Government Gazette, Vol 89, Part 158, 20 October, B E 2515 (1972), an annual licence fee for hunting throughout the kingdom is 500 baht and for hunting within a provincial area 100 baht

[61] The Wild Animals Conservation Act, 1992, Section 36 This marks a significant difference from the old Act where permission can be given by a decision of the Director-General acting on his own

[62] Under the 1960 Act, Section 27, the Committee consisted of nine to fifteen members It was

membership to government officials, an element of public participation can be observed in the composition of the new Committee, as can a potentially more far-reaching control over the implementation of the Act. The Committee consists of fifteen to twenty members.[63] It is chaired by the Minister of Agriculture, with members appointed *ex officio* from a wider range of government departments, notably including the Permanent Secretary of the Ministry of Foreign Affairs, and the Director-Generals of the Fishery Department and of Foreign Trade.[64] Perhaps, the most important change in the Committee's composition lies in the requirement that at least five and not more than eleven experts are to be appointed to sit on the Committee.[65] Furthermore, it is stipulated that at least half of these outside experts must be appointed from representatives of associations or foundations which are concerned with the conservation of wild animals.[66] In addition to the powers possessed by the former Committee to approve designation of "wild animals sanctuaries" and the types of animals whose hunting is prohibited, the new Committee is given broader powers to monitor the implementation of the Act and to approve all Royal Decrees, Ministerial Regulations and other regulations enacted under it.[67]

The involvement of NGOs in the Committee marks a new dimension in wildlife conservation in Thailand as the work has hitherto always been treated as belonging to the governmental domain If exercised properly, the Committee could be a tool for influencing governmental policies However, though it is more than two years since the

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chaired by the Permanent -Secretary of the Ministry of Agriculture Others were members *ex officio*, i e Director-Generals of RFD, Interior Department and the Land Department, the remaining five, but not more than eleven members were appointed by the Cabinet

63 The 1992 Wild Animals Conservation and Protection Act, Section 9

64 *Ibid* The inclusion of the Director-General of the Department of Fisheries within the Committee is logical as the conservation of wild animals as well as implementation of CITES involve also some aquatic species. Having officials from the Ministry of Foreign Affairs and the Department of Trade on the Committee also reflects the fact that conservation of wild animals has international aspects and is not perceived as a matter of purely domestic concern, as formerly.

65 *Ibid*

66 *Ibid*, Section 9(2)

67 *Ibid*, Section 15

Act entered into force, it is difficult to discern any significant change brought about by the Committee. According to the Foundation for the Protection of Wildlife in Thailand, which is one of the NGOs represented on the Committee, it meets only two to three times a year. Usually the NGOs are not informed of the meetings sufficiently far in advance and, as a result, are sometimes unable to send a representative to them. Matters which have been considered by the Committee so far involve those concerning allocation of forest areas for construction of dams and roads, and giving approval to applications for wild animals' export. It has also been observed that the voices of NGO representatives are often overwhelmed by those of government officials sitting on the Committee. Thus, the inclusion of NGOs in the Committee, as provided by the Act, is not viewed as positively as one would have expected [68]

Another improvement on the previous law is the express prohibition, as specified in a Ministerial Notification on import and export of wild animals or their carcases except when appropriate import or export permits have been granted by the Director-General of RFD [69] This provision is a clear enactment of domestic legislation to implement CITES [70] A Ministerial Regulation laying down procedures for application for import, export, and transit licences was enacted in 1994. The procedures govern, *inter alia*, application for a licence "to import, export, or transit endangered species stipulated by CITES as requiring an import, export or transit permit or certificate".[71]

Regulation of trade in reserved and protected species or in the carcases of such wild animals is provided for in a separate paragraph Import or export of reserved species,

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[68] Interview conducted by the author with a senior officer of the Foundation for the Protection of Wildlife, 22 March, 1995, Bangkok, Thailand

[69] *Ibid*, Sections 23-24

[70] *Ibid*, Section 24 specifically provides that the import, export or transit of wild animals or carcases of wild animals which need a permit or a certificate of import, export or transit according to the International Convention on Trade in Endangered Species and Their Products requires a permit or a certificate from the Director-General of RFD

[71] Ministerial Regulation No 2 (B E 2537), Royal Government Gazette, Vol 111, Part 51 Gor, 16 November, B E 2537 (1994), 50.

protected species or carcases of such animals is prohibited except where these are products of breeding in captivity and an import or export permit has been granted by the Director-General.[72] The prohibition on import and export of reserved and protected species corresponds with another provision which prohibits trading in such species, and carcases and products derived from such species, except those obtained by breeding in captivity.[73] This provision is probably aimed at regulating domestic trading of wild animals which, until recently, was still widely and openly practised. Similarly, Section 19 prohibits possession of reserved and protected wild animals and their carcases, except those obtained from breeding in captivity and for which a permit has been granted by the Director-General. Transport or moving of such animals for the purpose of trading also needs a permit.[74] None of the prohibitions concerning hunting, breeding, possessing and collecting or endangering nests of reserved and protected wild animals apply in cases where these activities are carried out in the interest of exploration, education and academic research, protection of wild animals, and breeding for zoos run by the Government and with permit from the Director-General.[75]

Perhaps the most controversial provisions in the new Act from the perspective of some NGOs are those concerned with breeding in captivity and the trading of species obtained from such breeding Section 17 authorises the Minister, with the approval of the Committee for the Conservation of Wild Animals, to issue Ministerial Regulations determining the types of protected species which are permitted for breeding. It is worth noting that only breeding of specified protected species is allowed and no similar allowance is made for reserved species. In December, 1994, a Ministerial Regulation was enacted listing protected wild animal species breeding of which is permitted[76] These include 6 species of mammals, 16 species of birds, 4 species of reptiles, and one

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[72] *Ibid*, Section 23 (2)
[73] *Ibid*., Section 20.
[74] *Ibid*, Section 25,
[75] *Ibid*, Section 26
[76] Ministerial Regulation No 6 (B E 2537), Royal Government Gazette, Vol 111, Part 58 Gor, 19 December, B E 2537 (1994), 71

species of amphibians [77] A person may apply for a licence to breed permitted protected species and, as mentioned above, such species and carcases obtained from breeding can then be traded, imported, exported, and transited. Although it can be argued that breeding in captivity can help to promote conservation of wild animals and preserve such animals from extinction, and that such a provision is consistent with CITES, there is a real danger that allowance of such exceptions is open to abuse. An immediate problem which comes to mind is the issue of how to distinguish between animals caught from the wild and those bred in captivity, given the RFD's poor past performance in controlling trading of wild animals, and the relative ease with which documents certifying animals as having been bred in captivity can be acquired, even though in fact they have been caught in the wild. Therefore, permitting trading of animals bred in captivity can be seen as facilitating the commercial interests of those who benefit from wild life trading. It is also objectionable on moral grounds. The ideal situation is to have a provision which allows breeding of animals in captivity for the purpose of conservation only.

On the whole, as far as the substantive law is concerned, the 1992 Conservation and Protection of Wild Animals Act should provide better protection for wild animals. However, it has been observed that little has changed in practice as trade in wild animals still persists [78] For instance, although prohibition on trading of wild animals makes it no longer possible to openly display animals, as was done in the past, prospective customers would generally know where to get the animals they want Furthermore, with the lax enforcement of the law and extensive bribery, it is not difficult to obtain the necessary document to certify that a wild animal concerned has been obtained through

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[77] The six species of mammals are sambar, lesser mouse deer, common barking deer, civet cat, Indochinese hog deer, and pig-tailed macaque Examples of other species are various species of partridges, crested fireback, Siamese fireback, green peafowl, python, Siamese crocodile and estaurine crocodile.

[78] Interview with a senior officer of the Foundation for the Protection of Wildlife, *supra*, note 68

breeding in captivity, although it is in fact caught in the wild.[79] All this points to the fact that what is required is more than enactment of laws for wild animals' protection An overhaul of the RFD may be necessary effectively to administer the laws and regulations concerned. In this regard, a great deal of political will and commitment on the part of the Government is needed to bring about any such changes.

6. The 1941 Fishery Act

The Department of Fishery is primarily responsible for the implementation of CITES as far as aquatic species are concerned but there is no direct legislation in this regard Control of import of aquatic species is based on Sections 53 and 54 of the Fishery Act, 1947 as amended. Section 53 prohibits possession of any aquatic species listed by a Royal Decree issued under the Act without permission from authorised officials[80] Section 54 prohibits import of certain aquatic species listed by a Royal Decree issued under the Act without permission from authorised officials. It is not clear whether listing of aquatic species subject to import control is based on the CITES listings but, according to officials in charge of issuing import permits, not all aquatic species listed under CITES are regulated In this respect, there are three important Royal Decrees which have been issued under Sections 53 and 54 of the Act. The Royal Decree of 1982 listed 176 species of fishes, 21 species of crustacea and 15 species of seaweeds which are subject to import control.[81] The Royal Decree was issued to prevent import of certain species which originated from countries with epidemics and which thus might be carriers for spreading diseases in Thailand. Another Royal Decree issued in 1987 was aimed at prohibiting possession and import of dangerous fishes of the families of Serrasalmus, Rooseveltiella and Pygocentrus, such as the piranha and caribe, which are

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[79] *Ibid*

[80] It should be noted that this Section was originally aimed at controlling the possession of some dangerous aquatic species such as the piranha and caribe of the family of Serrasalmus from the Amazon

[81] Royal Decree prohibiting import of certain aquatic species, B E 2525, Royal Government Gazette, Vol 99, Part 189, 23 December B E 2525 (1982)

known to be predatory aquatic species [82] The third Royal Decree worth mentioning is the one issued in 1992 listing aquatic species possession of which is prohibited.[83] This Decree prohibits the possession of corals, corallines, sea turtles, hawksbill turtles and products derived from them for commercial purposes. This last Decree seems to be the only one which was issued for conservation purposes

As far as export of aquatic species is concerned, the Department of Fishery has no power to regulate export Instead, regulation of the export of aquatic species has, in the past, been based on the power of the Ministry of Commerce to issue Ministerial Notifications listing items which are subject to export control There are at least nine such Ministerial Notifications, some of which are based on conservation grounds but again it is not clear how far the listing has taken account of species listed under CITES.

Therefore, while legislation has been introduced to facilitate better implementation of CITES in order to protect wild fauna and flora, there seems to be a gap in the law as far as protection of aquatic species are concerned The Department of Fishery, which has been designated as one of the management and scientific authorities for implementing the Convention, does not possess the power to regulate export of endangered species and the regulation of import in the past seems to have been prompted by the desire to ban certain unwanted aquatic species rather than for conservation reasons Interviews with the only two officials in charge of issuing import permits[84] revealed that there was a certain degree of coordination between the Ministry of Commerce and the Department of Fishery concerning issuance of export permits and they deemed the present situation as satisfactory, especially as not all that many aquatic species are listed under CITES. They also take account of the CITES' listing in issuing permits. They have the relevant Appendices on their desk, and refer to these when considering application for import

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[82] Royal Government Gazette, Vol 104, Part 49, 18 March B E 2530 (1987)
[83] Royal Government Gazette, Vol.109, Part 42, 8 April B E 2535 (1992)
[84] Interviews conducted by the writer on 6 September, 1994

permits and when consulted by the Ministry of Commerce concerning issuance of export permits. It seems, therefore, that despite the fragmented laws, the officials have adopted a practical way of working to perform their function of implementing CITES. However, it would still be desirable to amend the Fishery Act to authorise the Department of Fishery to list CITES species as endangered species subject to import and export regulation The Department should also have the power to exercise both import and export control, rather than relying on coordination with the Ministry of Commerce. Problems concerning the availability of the manpower necessary to operate the system effectively should be pointed out, however. It is obvious that one of the reasons why the Department is content to leave export control to the Ministry of Commerce is that they do not have sufficient personnel to carry out the work themselves.

On conservation of natural habitats, the Fishery Act has been seen as "a potentially powerful legal tool" for the protection of mangrove forests.[85] According to Section 7, the Provincial Governor and the local officials of the Department of Fishery have the power to designate, with the approval of the Minister of Agriculture and Cooperatives, fishing sites within their areas as "preserve sites". The areas designated are to consist of fishing sites within a monastery or a holy place, or those adjacent thereto, or areas which are in the vicinity of a lock, sluice, dyke, or embankment. It is prohibited for any person to fish or to breed aquatic species within the designated areas.[86]

7. The 1975 Seed Act, as amended in 1992

Having been amended in 1992, this Act is now the main legislation regulating trading of wild flora. It should be explained from the outset that the original Seed Act, as promulgated in 1975, had nothing to do with conservation of wild plants. In fact, as its name suggests, it was enacted to promote use of good standard seeds and to regulate the quality of seeds sold to farmers. In other words, it aimed to protect farmers from fake

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[85] P Tasneeyanond and D Nifosi, *Thailand Country Report, supra*, note 53, p 214
[86] The Fishery Act, Section 8

seeds and to promote agriculture. These remain the main features of the Act even after the 1992 amendment The Act authorises the Minister of Agriculture to issue Ministerial Notifications listing the types and names of seeds which are subject to control.[87] He is also authorised to prescribe, *inter alia*, the standard and quality of seeds, methods of keeping seeds, types and quantities of materials used or blended in controlled seeds, chemical compounds allowed to be mixed in seeds, seeds containers and packaging, and species and quantities of controlled seeds which can be imported.[88] A licence is needed for persons wishing to keep seeds for trading, or to sell, import, export or transport seeds for commercial purposes.[89]

Apart from updating all the existing provisions, two important amendments or additions which are relevant to the conservation of biodiversity were introduced by the 1992 Act. Firstly, a few provisions were inserted directly to implement CITES. Section 29 ter prohibits import, export or transport of "conserved plant species" or any parts thereof, except under a permit issued by the Director-General of the Department of Agricultural Extension. "Conserved plant species" are defined by the Act as plant species listed in the Appendices of CITES.[90] Authorised officials have the power to search warehouses, vehicles, bags, packages including persons at plant check points.[91] They also have power to confiscate or repatriate the conserved plants imported in violation of the Act [92] It is worth noting that the Act distinguishes between "reserved plant species" and "conserved plant species".[93] Reserved plant species are defined simply as "plant species listed by the Minister of Agriculture and Cooperatives as reserved plant species",[94] and

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87 The Seed Act, Section 12
88 *Ibid*, Section 13
89 *Ibid*, Section 17
90 *Ibid*, Sections 3 and 29 bis A further Ministerial Notification of the Ministry of Agriculture was issued in 1993 to list all plant species listed in Appendix I of CITES as "conserved plant species" under the Act, Royal Government Gazette, Vol 110, Part 61, 11 May B E 2536 (1993), p 4.
91 *Ibid*, Section 39 bis
92 *Ibid*, Section 39 ter.
93 *Ibid*, Sections 3, 29 and 30
94 Section 3.

according to Section 30, the export of reserved plant species is prohibited, except with a permit from the Minister which will be given only for academic experiments or other forms of research. Although the rationale for listing reserved plant species is not stated in the Act's objectives, presumably these provisions are aimed at regulating the export of native plant species. Thus, the provision also has potential as one that could be used to regulate access to native genetic resources.

It can be said that except for the provisions on regulating trade in plant species listed under CITES and the permit system for artificial plant breeding, the rest of the Act has little relevance to conservation of plant species Indeed, it would have been more appropriate to enact a separate Act to implement CITES.[95] However, the Act should bring some improvement compared to the situation existing prior to 1992 when import and export of endangered plant species could take place quite freely. Some control was exercised under the 1964 Plant Quarantine Act[96] to monitor import of "restricted materials" of plants but in practice there was no restriction on export Most officials then claimed that they did not have the necessary legal power to exercise control over import and export of endangered species Thus, the Seed Act, as amended in 1992, now provides them with a legal basis upon which to act. With all endangered species under CITES now appropriately listed in Thailand,[97] the main concern is how effectively the

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[95] As a matter of fact, a draft Endangered Wild Flora Act was being prepared in 1991, but due to a perceived need for haste in getting the legislation passed, only a few provisions from the original draft were incorporated into the Seed Act The reasons for haste were that Thailand was anxious to get the trade ban on CITES' endangered species lifted and that the term of the Legislative Assembly appointed following the political turmoil in 1991 was ending since a general election was forthcoming

[96] Royal Government Gazette, Vol 81, Part 27 (Special Issue), 21 March B E 2507 (1964)

[97] See Notification of the Ministry of Agriculture and Cooperatives on Conserved Plant Species, No 1, B E 2536, Royal Government Gazette, Vol 110, Part 61, 11 May, B E.2536 (1993) The Notification in effect lists all endangered species in accordance with the three Appendices of CITES It has been updated by a subsequent Notification in accordance with a Resolution at COP 8 of CITES in Tokyo which excludes propagated plant in the family of *Orchidaceae* from the scope of the Convention It is worth noting that the practice of the Department of Agricultural Extension, which is the management authority as far as plant species are concerned, in listing CITES species in Ministerial Notifications is different from the RFD, which is the management authority for wild animal species. In the latter case, as seen earlier, the RFD only prescribes procedures governing trading of CITES' species without further listing

controls enacted can be exercised under the Act. The prospects are not very promising Although the Department of Agricultural Extension seems to be more informed and active when compared to the RFD, it is seriously understaffed. At present, the Department has assigned to its Division on Control of Plants and Agricultural Materials the prime responsibility for implementation of CITES. In May, 1992, the Division set up a unit for conservation of wild flora to act as the national management and scientific authority for this purpose. At the time of writing, the unit has only six technical experts on plant varieties. They work in conjunction with some 80 officials of the Department who are assigned to 23 plant checking points throughout the country. It has been admitted that shortage of staff is a problem and where there is no plant checking point, officials of the Customs Department will have to be relied upon to execute the task. Obviously, customs officials will not initially possess the skills necessary to identify endangered plant species. To mitigate the problems, the Department of Agricultural Extension has published a handbook with pictures which it is hoped will facilitate the work of concerned officials

8. Conclusions

(1) The major threats to the loss of biodiversity in Thailand are deforestation, destruction of wildlife habitats through human activities, and wildlife trading. Thailand has experienced more than 50 percent of forest loss during the last four decades. In combating deforestation, the approach adopted in the past has been the "command and control" approach, i.e. prohibition of forest encroachment including arbitrary drawing of boundaries between agricultural land and forest. The National Forest Reserve Act, which prohibits encroachment, has completely failed to halt deforestation, and in fact in 1988, it was estimated that about 55 million rai (8 8 million hectares) have now been encroached upon by some 8 7 million people, most of whom are subsistence farmers.[98]

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them It is probably assumed, therefore, that enforcing officials are aware of the list and have it readily available for the performance of their duties

[98] Panayotou and Parasuk, **Land and Forest...**, *supra*, note 29, pp 16, 24 The encroached area is finally turned into agricultural land The farm-holding areas tripled from 50 million rai in

A more recent figure in 1991 by the RFD reveals an even greater disparity between the declared forest reserve area and the actual forest cover. Out of the 144 million rai (23 million hectares) declared as forest reserve areas up to 1991, only 85 million rai (13 6 million hectares) are under forest cover.[99] The gap between the actual natural forest area and the declared forest indicates that laws which do not take account of the socio-economic conditions of the rural people cannot work. At the policy level, it seems that the need to involve local people by allowing them to participate in the development of the regime for conservation of natural resources has now been recognised.[100] It is also stated that people's organizations and NGOs should, at both the national and local levels, be given a role in determining natural resources management programmes, as well as in monitoring and assessing the success of such programmes [101] Enactment of new laws, such as a Community Forest Act, to enable and encourage increased public participation in management of the natural resources has been suggested.[102] The recognition of the principle of public participation corresponds with the similar provisions adopted at the international level at UNCED, reflected in the Rio Declaration and in Agenda 21 At least so far as the forest resources are concerned, it is a necessary principle to ensure a sustainable future of natural resource use in Thailand. Stricter self-enforcement, based on public awareness, is required given that there is little likelihood that the Government will allocate the resources necessary effectively to enforce the relevant laws at the official level.

(2) While there are a few pieces of legislation dealing with forest conservation and regulation of the use of natural resources in the forest, there are no direct provisions for

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1950 to approximately 150 million rai in 1988, while the forests were shrunk from almost 200 million rai to 90 million rai over the same period

[99] M Laoprasert, *Laws Concerning Forests and Wild Animals*, Paper presented at the Training on Environmental Law, 6-10 March 1995, Patum Thani, Thailand, p 4, on file with the writer Of the 85 million rai of actual forest area, 40 3 million rai (6 45 million hectares) have been designated as national parks and wild animal sanctuaries, leaving the actual forest reserve areas to cover only 44 7 million rai (7 15 million hectares)

[100] The Seventh NESP, Chapter 4, p 232

[101] *Ibid*

[102] *Ibid*, pp 233 and 235

protection of wetlands in Thailand There are at least five categories of wetlands in Thailand, i e. coastal wetlands, mangrove swamp forests, river and stream systems, natural fresh water lakes, ponds and marshes; and swamp forests.[103] There are several threats which have led to the loss of wetlands in Thailand, in particular, the over-exploitation and inefficient utilization of wetland's resources (e.g use of high-quality timber and only few species for fuel wood in charcoal production); expansion of agricultural lands and irrigation schemes, development of aquaculture (especially shrimp farming); and reclamation for the expansion of industrial and urban development [104] The only available data indicating the scale of wetland loss are those concerning mangrove forests It has been estimated that the areas of mangrove forests in Thailand have been reduced from 2.3 million rai (367,900 hectares) in 1961 to 1 1 million rai (180,559 hectares) in 1991, a spectacular reduction of over 50%.[105] The dramatic decrease in mangrove forest areas has a serious implication for biodiversity as about 74 species out of the total of 79 mangrove tree species known to the world are found in Thailand Thai mangrove forests are also known to support the existence of around 35 species of mammals, 106 species of birds and 25 species of reptiles.[106] The conservation of wetlands had received very little attention until recently. Under the present legal framework, protection can only be achieved indirectly by designating some areas of mangrove forests as forest reserves or national parks. As has been noted, designation of forest reserves has been unsuccessful as a tool for controlling encroachment, which leads to degradation. Another possible means of preserving

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[103] Information leaflet on **Wetlands in Thailand**, published by the Biological Resource Section, Office of Environmental Policy and Planning, Ministry of Science, Technology and the Environment, September 1994 See also D A Scott (ed), **A Directory of Asian Wetlands**, IUCN, Gland, Switzerland and Cambridge, U K , 1989, pp 667-733, where wetlands in Thailand are classified into 9 categories and 42 important wetland sites are listed

[104] **Wetlands in Thailand**, *Ibid*

[105] *Ibid* Between 1975 and 1989 alone, over 132,000 hectares of mangrove forests were converted to other use, half of which was for aquaculture, especially shrimp farming, W Macnae, **Mangrove Forest and Fisheries**, IOFC development, FAO, Rome, 1987, p 35, cited in S Wongsakul, **Appropriate Legal Structure for Mangrove Forest Management**, LLM thesis, Chulalongkorn University, 1992

[106] **Thailand National Report to UNCED, 1992**, p 142

mangrove areas is by designating fishing preserve sites as provided in the Fishery Act discussed earlier, but again this is not a comprehensive solution to the problem, especially as there is little evidence that the Fishery Department and the officials concerned have exercised this power on a significant scale

In the light of the importance attached to wetlands as natural habitats, as indicated by the Ramsar Convention, Thailand should take a more active role in conserving its mangrove forests. The Seventh Plan identifies the maintenance and rehabilitation of the remaining mangrove forest areas as a strategic objective but no legal measures are suggested.[107] As a first step, Thailand should ratify the Ramsar Convention and enact laws specifically to protect mangrove forests and wetlands. However, the shortcomings of enforcing forest conservation programmes without the local people's participation should always be noted, and local people should be involved in forest management wherever possible Participation in the Ramsar Convention would also enable Thailand to apply for assistance from the Fund recently set up under the Convention.

(3) As a Party to the World Heritage Convention, Thailand should be more active in listing natural sites as world heritage sites. The listing would involve international interest in the listed natural sites and thus prompt more effective action in the protection of the habitats concerned. Technical and financial assistance could also be sought under the World Heritage Fund. To date, only one natural site has been listed under the Convention. At the World Heritage Committee meeting in Phuket, Thailand, during 12-17 December, 1994, the Thai delegates announced that they would nominate 18 more cultural and natural sites to the World Heritage List.[108] Among the natural sites mentioned for nomination was the Andaman Sea area, encompassing Phuket Island,

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107 The Seventh Plan, p 231

108 S. Rosse, *The Future of Asia's Past*, in **Sawasdee Magazine**, Thai Airways International, May 1995, pp.40-46, at p 43. Several of the cultural sites nominated are in Bangkok and are already well protected These include the Stupa of the Temple of Dawn, the Marble Temple, the Anandha Samakhom Throne Hall, and Vimarnmek Palace Thus, some critics have charged that such purported nomination may be motivated by commercial interest in promoting tourism

Phang Nga Bay, and the Semilan-Surin islands [109] An alternative to listing a site on the World Heritage List has also been suggested in the form of establishing an independent Heritage Trust, along the lines of the British National Trust, to manage the country's monuments.[110] However, it seems that this suggestion is intended to apply particularly to cultural sites. In any case, the benefits of listing more sites on the World Heritage List do not appear to have been fully appreciated by either the government officials concerned or by some NGOs interested in conservation.[111] Lack of ideas and expertise to initiate projects for technical or financial assistance, which Thailand is entitled to as a Party to the Convention, are partly to blame for misconceptions concerning the Convention.[112] Promotion of better public understanding about the World Heritage Convention and the positive consequences of listing a site on the List may help to raise more public awareness which would lead to the country's more active participation in the Convention.

(4) Although Thailand has been a Party to CITES for several years, it only enacted domestic legislation seriously to implement the Convention in 1992 The RFD, the Department of Agricultural Extension and the Department of Fisheries are the management and scientific authorities for wild fauna, wild flora and aquatic species respectively. Of these, most progress seems to have been made by the Department of Agricultural Extension in enacting subordinate legislation listing all endangered species

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109 *Ibid.*

110 *Ibid* , Rosse cites former Prime Minister Anand Panyarachun's address to the Conference on "The Future of Asia's Past · Preservation and the Architectural Heritage of Asia", Chiang Mai, January 1995

111 For instance, it is common to hear statements made along the lines that Thailand earns nothing from its membership of the World Heritage Convention and, on the contrary, has to pay annual contribution to the World Heritage Fund Some academics active in environmental NGOs even view the fact of a particular site being listed, and thus becoming a world heritage site, as forcing the site to be opened for research and studies by foreigners

112 See note 111 above and the case of a senior official chiefly responsible for coordinating the work relating to the World Heritage Convention and Thailand's nominated sites said that she did not know what project should be initiated, and that she was waiting for instructions from her superior (meaning probably the Director of her Division) Another major obstacle seen by the official was that any proposed project, if initiated, was to be drafted in English, a task requiring so much effort that it would deter any kind of initiative

under CITES as species subject to trade regulation as well as import and export control, and in producing a manual to aid the work of the officials concerned, in particular customs officials More laws will have to be introduced to authorise the Department of Fisheries to assume fuller control over regulation of trade in aquatic species, especially control over export. Despite the new legal basis, the RFD also does not seem to have made much progress. In all agencies, staff shortages, especially of suitably qualified and trained staff, is a serious problems and customs officials have to be relied upon to perform inappropriate tasks Customs officials' lack of expertise in identifying prohibited items could prevent effective implementation of the Convention. Training programmes, as advocated by IUCN, the CITES Secretariat and Agenda 21, are urgently required to improve enforcement

(5) Except for the ASEAN Agreement on the Conservation of Nature and Natural Resources, which has not yet come into force, no other international environmental agreement has been concluded in the Asian region Environment should be given importance equal to that accorded to economic cooperation on the ASEAN agenda Some international agreements based on the European models, such as the Bonn Convention on the Conservation of Migratory Species of Wild Animals and the Berne Convention on the Conservation of European Wildlife and Habitats, should be worked upon

(6) In working towards an international agreement on the conservation of forests, account should be taken of exploitation of forest resources in politically unstable countries, such as Myanmar and Cambodia, so that some kind of international measures can be introduced to check the unsustainable use of the resources. It is difficult to expect the Thai Government to introduce domestic legislation to prohibit exploitation of natural resources in neighbouring countries, especially when the benefits are being enjoyed by certain politically powerful groups and politicians. However, international agreements to which a national Government is committed, or unanimous UN

Resolutions, can provide the legal justification for such courses of action if there is the political will so to act. The experience of CITES shows that international pressure can act as a tool in bringing about legislative changes at the domestic level.

(7) The Thai Government has set itself the target of increasing the country's forest cover to 40 percent of the country's total area, 25 percent being in the form of conservation or natural forests and the other 15 percent being economic forests. At present, the areas protected as national parks and wild animal sanctuaries cover about 40.3 million rai (6.45 million hectares).[113] To achieve the 25 percent target of conservation forest, at least 88 million rai (over 14 million hectares) will have to be under natural forest cover. This means that there cannot be any further encroachment into the natural forest and all existing national parks and wildlife sanctuaries must be strictly maintained. In addition, more areas of national parks or wildlife sanctuaries will have to be declared further within the watershed areas. Meanwhile, the Government's reforestation programme remains problematic and the policy of promoting commercial or economic forests is still controversial. The granting of concessions to private entrepreneurs to plant fast-growing trees, namely eucalyptus, to produce wood for the pulp, paper, and wood chips industries should be reconsidered. The fact that nominal fees are being charged for such concessions and that companies engaged in such activities receive promotional privileges from the Board of Investment for both planting and processing makes this line of policy the more questionable. It seems that the Thai Government has eventually realised that deforestation problems cannot be solved unless the poverty problems of landless farmers are seriously tackled first. Thus, land reform schemes have been lauched to allocate degraded forest areas to farmers with some form of non-transferable legal rights to land, except through inheritance. However, the operation of land reform schemes has produced limited impact so far and the criteria used for selecting land

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113 This comprises 24 million rai (3 84 million hectares) of national parks, and 16 3 million rai (2 6 million hectares) of wild animal sanctuaries, see M Laoprasert, *Laws Concerning Forests and Wild Animals*, *supra*, note 297

recipients have often been questioned [114]

The Government has also, to a more limited extent, recognized the concept of "community forests" which would allow participation by local people living near a particular forest area to participate in the management and conservation of the forest [115] A Community Forests Act is being contemplated, with strong support from some environmental NGOs. Although the concept of "community forests" is sound, especially as it promotes the principle of public participation, without which the problem of deforestation may never be solved, it is not certain whether the concept is capable of general application to all rural communities.[116]

This chapter has attempted to outline and touch upon the major problems and the relevant laws affecting the conservation of biodiversity in Thailand. The study has revealed that there are obvious gaps in some areas, such as the protection of wetlands In most other areas where there is already existing legislation, lack of effective law

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[114] The political importance of land reform issue can be seen in the dissolution of the Thai Parliament on 18 May, 1995, following the Government's defeat in a no-confidence motion concerning its mishandling of the land reform schemes

[115] The rationale for the community forest concept is that since the forest directly affects the livelihood and well-being of the local people, rural communities would have an interest in and thus take care of their forests In many cases, the forest is conserved primarily for its watershed value (one which is highly important for the livelihood of villagers), with no or minimum harvesting of forest products, such as food and fodder

[116] See K. Faichampa, *Community Forestry in Thailand · A Case Study from the North*, in S Tongpan et al, **Deforestation and Poverty : Can Commercial and Social Forestry Break the Vicious Circle ?**, TDRI, 1990, pp 139-171 This study of "locally-initiated community forestry projects" in Northern Thailand found that community forest protection will work only where the rural communities concerned are neither overly dependent on, nor overly independent of the forests as the natural resource base of their communities In poverty-stricken communities, where villagers rely heavily on forest resources for their livelihood, members of such communities can themselves be a threat to the forest. On the other hand, in communities where members rely more on off-farm income generating activities than on the forest, the diminished importance of the forest for their livelihood and the rising opportunity cost of forest protection will discourage forest protection In the latter case, there will be greater land speculation, with more agricultural and illegally claimed forest land sold It is also observed that in communities where villagers are engaged in logging or deforestation activities themselves, community forest protection can in effect serve to provide the communities concerned with the sole right over forest use which could be detrimental to the environment

enforcement and shortage of manpower or suitably qualified staff present serious problems which undermine the conservation impacts of the laws Deforestation, which threatens biodiversity and at the same time is one of the major sources of air pollution in terms of the CO_2 emitted, remains a challenging issue to be resolved. With such complex socio-economic factors underlying the problem, the task is by no means easy It is obvious that much more needs to be done at the national level in Thailand both in terms of laws and policies

CHAPTER 7

REGIONAL APPROACH TO ENVIRONMENTAL PROTECTION : THE CASE OF ASEAN

1. Introduction

Since it is now generally accepted that environmental problems are transboundary, even in some cases where they are not apparently so, environmental impacts are seldom confined to the territory of one state. In addition, some environmental problems are issues of global "common concern". The loss of biological diversity and the depletion of the ozone layer constitute examples of such problems. Therefore it is desirable that cooperation among States at the regional and international levels should be achieved as far as possible. As has been observed, there is more likelihood that international environmental law will be enforced if standard-setting is pursued not only at the global level, but also at the regional level which allows for "closer orientation towards regional needs, interests or characteristics".[1] The need for regional cooperation in environmental management is articulated in the various areas throughout Agenda 21.[2] Chapter 38 on "international institutional arrangements" further specifies the role of "regional economic and technical cooperation organizations" in promoting regional and sub-regional capacity-building, promoting the integration of environmental concerns in regional and sub-regional development policies, and promoting regional and sub-regional cooperation regarding transboundary issues related to sustainable development.[3] The Brundtland Report also recognised this need in stating that "the various regional organizations need to do more to integrate environment fully into their goals and activities. New regional arrangements will especially be needed among the

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[1] R Mushkat, *Environmental Sustainability . A Perspective from the Asia-Pacific Region*, 27 **UBCLR** (1993) p 153, at p.165

[2] See for example, Chapter 2 (promoting sustainable development through trade), paras 2 10 - 2 12, Chapter 3 (combating poverty), Para 3 10, Chapter 9 (protection of the atmosphere), para 9 29, chapter 10 (integrated approach to the planning and management of land resources), para 10 12,, Chapter 11 (combating deforestation), paras 11 6, 11 16, 11 25, 11 34, Chapter 17 (protection of the oceans), paras 17 58 - 17 63, 17 88 -17 91 etc.

[3] *Ibid* , Paras 38 29 - 38 35

developing countries to deal with transboundary environmental issues".[4] Implicit in this statement is the assumption that the level of regional cooperation among developing countries in environmental management is still relatively low. Any overview of existing regional organizations is likely to support this presumption

In the Asia-Pacific region, there is evidence of some regional cooperation in fisheries management,[5] but on other wider environmental issues, the ASEAN[6] remains the only major organization in Southeast Asia where some significant level of environmental cooperation has been achieved It is worth noting that there are other regional bodies which conduct environmental activities in the region, such as the UN Economic and Social Commission for Asia and the Pacific (ESCAP), UNEP, IMO, Asian Development Bank (ADB),[7] FAO and UNDP,[8] but these regional institutions, unlike ASEAN, are not of truly regional initiatives The practice of ASEAN to date, however, indicates that it is

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[4] WCED, **Our Common Future**, *op cit*, chapter 1, note 1, p 20

[5] See Gordon R Munro, *Environmental Cooperation Among Pacific Developing Coastal States . A Fisheries Case Study*, 27 **UBCLR** (1993) p 201, where an account is given of some forms of cooperation, mostly in the field of research and coordination on an informal basis, concerning the management of tuna which is a highly migratory species harvested by the Pacific Islands, the ASEAN countries and the Pacific Latin American countries Regional organizations which are the basis for cooperation on this and related issues include the South Pacific Commission (SPC), the South Pacific Forum Fisheries Agency (FFA), the Permanent South Pacific Commission (Spanish acronym CPPS) and the Latin American Fisheries Development Organization (OLDEPESCA)

[6] ASEAN is the acronym for the Association of Southeast Asian Nations established by the Association of Southeast Asian Nations Declaration, August 8, 1967, (*the Bangkok Declaration*). reprinted in 6 **ILM** (1967) 1233 The member states of ASEAN consist of Brunei, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam (Brunei having been admitted to the organization in January, 1984, and Vietnam in July 1995 At present, Laos, Cambodia and Myanmar (as did Vietnam prior to becoming an ASEAN member) have observer status at various ASEAN meetings. Vietnam's entry marks another step towards realising a long-term goal of ASEAN to include all the countries of Indochina within the grouping It can be expected that Laos, Cambodia and Myanmar will eventually join ASEAN, see *ASEAN gets its first Communist member*, **Financial Times**, 27 July 1995, p 3

[7] See *Regional Development Banks . Asian Development Bank*, 3 **YIEL** (1992) p 538

[8] For an overview of the relevant institutions and instruments which operate in Southeast Asia, see G Rose, *Regional Environmental Law in South East Asia*, 4 **RECIEL** (1995) p 40 ESCAP's main area of environmental activity has been information dissemination and education, primarily through publications UNEP's main regional achievement has been the establishment of the inter-governmental Coordinating Body on the Seas of East Asia (COBSEA) under the UNEP Regional Seas Programme

desirable that the role of ASEAN in environmental fields should be enhanced The purpose of this Chapter is to explore the role of ASEAN in environmental management and to assess its problems as well as its potential as a medium for regional environmental cooperation In doing this, some consideration will be given in the following Chapter to the European Community (EC) and the European Union (EU) as a form of regional cooperation from which lessons can be learnt. The choice of using the EC as a model and a comparison is appropriate as the EC is the first and remains the only comprehensive regime with powers for regional environmental regulation and harmonisation The EC approach and standards are also realistic goals for ASEAN as they represent the level of harmonization which can be achieved among the states with different levels of economic, political and social development, a situation applicable to ASEAN countries and other countries in Southeast Asia to a certain extent, although, of course, the situations are different since no EC/EU member state can be categorised as a developing State.

The recent emergence of economic groupings in Asia in response to the growing trend in other parts of the world to form trading blocs is worth noting from the outset. A clear example is the strengthening of economic and trade relations among the ASEAN countries, apparently as a reaction to the conclusion of NAFTA,[9] and the more recent development of the loosely established forum, "Asia and Pacific Economic Cooperation" (APEC).[10] Of even more informal status is the East Asia Economic Caucus (EAEC),

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[9] The North American Free Trade Agreement (NAFTA) was concluded by Canada, Mexico and the U S A on 11 August, 1992 to create the North American Free Trade Area The Agreement was proposed in June 1992, the U S A already having a bilateral arrangement with Mexico (concluded 1987), and with Canada (concluded 1988) The Agreement came into force in November, 1993 following approval by the U S Congress of its ratification The major aims of NAFTA are to create a free trade zone, dismantling or reducing customs barriers on the North American continent within 10 years

[10] APEC cannot at present be regarded as a regional organization, rather, it is an informal forum where leaders of 18 countries in the Asia and Pacific region meet with the ambitious goals of establishing an Asia-Pacific free trade zone by the year 2020 It was originally an Australian conception but the U S played a major role in bringing about the first APEC meeting held on Blake Island off Seattle in November, 1993 No substantive issues were resolved at that meeting except for a decision to set up an APEC Secretariat in Singapore Its second meeting

which is intended to be a "loose consultative forum and not an institutional body leading to a trading bloc".[11] These phenomena indicate the prominence given to economic cooperation compared to other issue areas, especially since the region comprises countries which are among the fastest growing economies in the world.[12] The priority accorded to economic matters explains the fact that ASEAN has largely been preoccupied with activities concerning economic cooperation and that such cooperation has recently been accelerated further as will be seen below. However, as adverse environmental consequences from the developmental process have become more visible in many Asian countries,[13] there are signs that more consideration is being given to incorporation of environmental protection into development.

2. The Association of Southeast Asian Nations (ASEAN)

2.1 The Evolution of ASEAN

Like the EC, environment was not among its original objectives on the establishment of

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was held at Bogor in Indonesia in November, 1994 Its third was convened in Osaka in Japan in November 1995 The fourth APEC meeting is scheduled to be held in Manila in the Philippines in 1996 In the context of the divergent views and interests of the countries involved, including the unfavourable attitude of Malaysia towards an economic grouping dominated by big economic powers such as the U S , APEC has a long way to go before any substantive agreement can be reached For a commentary on APEC, see John Colmey and William Dowell, *No-Summit Summit : Leaders of the 18 APEC economies will gather in Indonesia to smile a lot and avoid any real action*, Time, November 7, 1994, p 42. The 18 APEC countries consists of the six countries of ASEAN (Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand), plus Australia, New Zealand, Japan, China, Hong Kong, Taiwan, the U S , Canada, South Korea, Mexico, Papua New Guinea and Chile, the last of which joined in 1994 However, at Canada's instigation, a meeting of APEC Ministers for Environment was held in Vancouver from 24-25 March 1994 The result of that meeting is a "Vision Statement" for APEC environmental activities which encourages members to integrate environmental considerations into policy making at all levels, see G Rose, *supra*, note 8, p 44

[11] See ASEAN Secretariat, **ASEAN Update**, July 1994, p 2 The idea behind the setting up of the EAEC is initially akin to ASEAN's, viz to form a caucus within APEC, consisting of the six ASEAN countries and the Peoples Republic of China, Japan and South Korea

[12] See Asian Development Bank, **Annual Report 1993**, pp 34-5. Economic growth in Southeast Asia as a whole continued on a steady course, accelerating modestly to 6 4% in 1993 from 6 1% in the previous year Malaysia had 8% GDP growth and Thailand nearly 8% GDP growth in 1993

[13] For an overview of critical environmental problems in ASEAN countries, see M Seda (ed), **Environmental Management in ASEAN : Perspectives on Critical Regional Issues**, Institute of Southeast Asian Studies, Singapore, 1993 Problem issues discussed include urban environmental problems in ASEAN cities, and management of fisheries and forests

the organization.[14] According to the Bangkok Declaration establishing ASEAN, the "aims and purposes" of ASEAN are, *inter alia*, to accelerate economic growth, social progress and cultural development in the region, to promote regional peace and stability, to promote active collaboration and mutual assistance in the economic, social, cultural, technical, scientific and administrative fields and to collaborate for the expansion of their trade and the raising of the living standards of their peoples.[15] Although these broadly stated aims and purposes could have been liberally interpreted (as in the case of the EC during its initial period before environment was accorded an importance in its own right under the Single European Act and the Masstricht Treaty) to cover cooperation in environmental matters, this has been suggested neither in the literature concerned nor by ASEAN activities in the period that followed In fact, ASEAN during the period from 1967 to 1975 made very little substantial progress towards greater cooperation even in the economic field, which has always been considered as of primary importance in the formation of ASEAN.[16] More progress has been made from 1975 onwards, the year often referred to as marking the beginning of the second phase of ASEAN. However, unlike the EC, in the period of over 28 years since its inception, ASEAN's achievement in the field of economic cooperation is far from impressive. Despite some of its achievement in promoting political and security issues, notably the common position on Cambodia and Vietnam, ASEAN is still relatively weak both in terms of the infrastructure supporting the organization and the political commitment accompanying it.

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[14] For account on the evolution of ASEAN and its activities concerning economic, political, and security cooperation, see generally, A Broinowski (ed), **Understanding ASEAN**, Macmillan Press, London and Basingstoke, 1982, A Broinowski (ed), **ASEAN into the 1990s**, Macmillan Press, Basingstoke and London, 1990, and R D Palmer, **Building ASEAN : 20 Years of Southeast Asian Cooperation**, Praeger, New York, 1987

[15] *Bangkok Declaration, supra*, note 6, p 1234

[16] While the period from 1967 to 1975 is often seen as a time of inactivity and stagnation, some writers view this period more positively as a period during which ASEAN developed a habit of consultation and a spirit of regionalism, which moved ASEAN from a state of mutual ignorance, isolation and conflict, see R Irvine, *The Formative Years of ASEAN · 1967-1975*, in Broinowski (ed), **Understanding ASEAN**, *supra*, note 14, pp 8-36

The work of ASEAN is invariably described in terms of three areas of cooperation, namely political and security cooperation, economic cooperation, and functional cooperation [17] The first two of these usually receive more publicity as well as being accorded more political commitment [18] ASEAN functional cooperation, which has largely remained unnoticed, covers cooperation in the fields of science and technology, social development, drugs, environment, and culture and information. It is worth noting that environmental issues were not added to the functional cooperation mandate until the Manila Summit in 1987 : when the Manila Declaration stated that ASEAN "shall cooperate in promoting the principle of sustainable development", integrating it into all aspects of development, and "shall focus on the need for policy guidelines to protect ASEAN's common resources and environment".[19]

A landmark in the evolution of ASEAN was the so-called "Bali Summit" where the

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[17] Although this division was not clear when ASEAN was established, documents resulting from subsequent ASEAN Summits spelled out in more detail the separate mandates for functional cooperation, extending them into the various areas, including, *inter alia*, prevention and eradication of drug and narcotics abuse and trafficking, human resource development, integration of women and youth in the development process and elimination of poverty, disease and illiteracy.

[18] As far as political and security cooperation is concerned, ASEAN has in the last twenty-five years been largely preoccupied with the problems in Indo-China, seen as affecting the political stability in the region. This is characterised by solidarity against communism in the sixties and early seventies and, more recently, involvement in the problems of Cambodia One of the objectives of political and security cooperation frequently referred to is the creation within the ASEAN region a "Zone of Peace, Freedom and Neutrality" (ZOPFAN), see *Kuala Lumpur Declaration (ZOPFAN Declaration, 1971*, reprinted in **Understanding ASEAN**, pp 294-6 More recently, an ASEAN Regional Forum (ARF) was formed following a decision by the ASEAN Heads of Governments at the Singapore Summit in 1992 ARF is intended to be a consultative forum where regional and political security cooperation issues in the Asia-Pacific region will be discussed The first Meeting of ARF was held in Bangkok on 25 July 1994 in Bangkok, Thailand This was attended by representatives from 18 countries, namely, the ASEAN Foreign Ministers, the Dialogue Partners of ASEAN, i e the U.S , Japan, South Korea, Australia, New Zealand, Canada, the EU, three observers, i e. Vietnam, Laos and Papua New Guinea, and two guests, i e China and Russia The latest development in ASEAN's political and security cooperation is the signing by all 7 member and observer countries of the Southeast Asia Nuclear Weapon-Free Zone (SEANWFZ) Treaty at the 5th ASEAN Summit held in Bangkok, 14-15 December 1995 The Treaty prohibits possession and production of nuclear weapons in the region but allows innocent passage of nuclear-powered ships.

[19] *The Manila Declaration*, 15 December 1987, reprinted in ASEAN Secretariat, **ASEAN Documents Series 1967-1988**, 3rd ed., 1988, pp 47-50, at p 49

Treaty of Amity and Cooperation in Southeast Asia was signed on 24 February, 1976.[20] The purpose of the Treaty is "to promote perpetual peace, everlasting amity and cooperation...".[21] The Treaty is open for accession by other States in Southeast Asia as well as the ASEAN countries.[22] Another important instrument which was signed at the Bali Summit was the Declaration of ASEAN Concord which, attempting to stimulate more action in ASEAN, set out a "programme of action as a framework for ASEAN cooperation".[23] The Declaration declared as one of ASEAN's "objectives and principles in the pursuit of political stability", "the elimination of poverty, hunger, disease and illiteracy". It therefore called for more cooperation in economic and social development "with particular emphasis on the promotion of social justice and on *the improvement of the living standard of their peoples*" (emphasis added).[24] The programme of action covered cooperation in various areas, viz. political, economic, social, cultural and information, security, and improvement of ASEAN machinery. The section on economic cooperation was the longest and the most specific of these,. The scope of the brief section on social cooperation included some issues of sustainable development It encouraged Member Countries to provide, *inter alia*, "support for the active involvement of all sectors and levels of the ASEAN Communities, particularly the women and youth, in development efforts", as well as intensification and expansion of cooperation "in

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[20] 27 **ILM** (1988) 610.

[21] *Ibid*, Article 1 Thus, in their relations with one another, the Parties will be guided by the fundamental principles of, *inter alia*, mutual respect for the independence, sovereignty, equality, territorial integrity and national identity of all nations, non-interference in each other's internal affairs and renunciation of the threat and use of force (Article 2) As far as regional cooperation is concerned, the Parties undertake, *inter alia*, to . promote active cooperation in the economic, social, cultural, technical, scientific and administrative fields (Article 4), collaborate for the acceleration of economic growth in the region, promote the greater utilization of their agriculture and industries, the expansion of their trade and the improvement of their economic infrastructure (Article 6), provide assistance to one another in the form of training and research facilities (Article 8), and to maintain regular contacts and consultations with one another (Article 9) Provision is also made for pacific settlement of disputes through friendly negotiations, good offices, mediation, inquiry or conciliation, as well as the modes of peaceful settlement contained in Article 33 (1) of the UN Charter (Articles 13-17).

[22] *Ibid*, Article 18 Vietnam and Laos acceded to the Treaty in 1992

[23] *Declaration of ASEAN Concord*, Bali, 24 February 1976, reprinted in **ASEAN Document Series, 1967-1988**, *supra*, note 19, pp 36-38, and also in **Understanding ASEAN**, *supra*, note 14, pp 278-282

[24] Preamble, para 3

meeting the problems of population growth" in the ASEAN region. Although it can be said that a mandate to deal with issues related to the environment and sustainable development was not lacking, ASEAN's efforts in the subsequent period after the ASEAN Concord have been overwhelmingly devoted to economic matters, and, to a lesser extent, regional security issues.

2.2 The Organizational Structure of ASEAN

The organizational structure of ASEAN is highly decentralised and difficult to understand for people not familiar with the work of ASEAN. In the original structure under the Bangkok Declaration, the machinery responsible for the functioning of ASEAN consisted of the Annual Meeting of Foreign Ministers (referred to as ASEAN Ministerial Meeting); a Standing Committee, which would meet in Member Countries in rotation, chaired by the Foreign Minister of the host country or his representative and having as its members the accredited Ambassadors of the other Member Countries, a number of *ad hoc* committees and permanent committees of specialists and officials on specific subjects, and finally national secretariats in each Member Country [25] The Standing Committee has as its function the execution of the Association's work between the annual meetings Following the Bali Summit in 1976, the ASEAN Economic Ministers' Meeting has now also become a permanent element in the ASEAN structure.[26] In Bali, nearly ten years after the inception of the organization, ASEAN Foreign Ministers also agreed to set up the ASEAN (central) Secretariat in Jakarta [27]

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[25] As in the case of Thailand, this normally consists of the Directors-General of the ASEAN Department within the Foreign Ministry of each Member Country

[26] Endeavouring to expand ASEAN's economic cooperation, the Declaration provides for, as machinery for such purpose, "Ministerial Meetings on Economic Matters" to be held regularly or as necessary

[27] *Agreement on the Establishment of the ASEAN Secretariat*, Bali, 24 February 1976, and also Protocol Amending the Agreement on the Establishment of the ASEAN Secretariat, Bangkok, 27 January 1983, **ASEAN Document Series**, *supra*, note 19, pp 165-170. The ASEAN Secretariat consists of the Secretary-General, and 3 Bureau Directors, viz Economic, Science and Technology, and Social and Cultural, in that order of seniority, a Foreign Trade and Economic Relations Officer, an Administrative Officer, a Public Information Officer, an Assistant to the Secretary-General, such other officers as the Standing Committee may deem necessary, and locally recruited staff

The Secretary-General is appointed by the ASEAN Foreign Ministers (upon nomination by a member country on a rotational basis in alphabetical order) for a term of two years.[28] The functions of the ASEAN Secretariat are laid down in broad terms under Article 3 of the Agreement. In essence, it is to act as a channel of communication between the various ASEAN bodies, co-ordinate and monitor all ASEAN activities, and "initiate plans and programmes of activities for ASEAN regional cooperation in accordance with approved policy guidelines" for consideration by Member Countries. Despite these broad terms of reference, ASEAN's practice has been that the Secretary-General acts only on instructions from the Standing Committee or the Ministerial Meeting.[29] As a result, the organizational structure of ASEAN has largely remained decentralised, with decisions taken and recommendations made by the various committees, sub-committees and working groups. It has been observed that one problem in ASEAN is that "very few people within the Association were in a position to have an effective grasp of both the overall and specific ASEAN activities".[30] Interviews conducted by the writer with certain officials in the various Thai governmental Departments involved in ASEAN work certainly confirm this.

The organizational structure of ASEAN was further adjusted at the ASEAN Summit in 1977. According to the new structure, the ASEAN Annual Meeting of Foreign Ministers retains its principal role as coordinator of ASEAN overall policy, but other ministerial groupings could report directly to the Meeting of ASEAN Heads of Government if they so wished. Significantly, the Economic Ministers were given full autonomy over economic matters, but they were to keep the Foreign Ministers informed of their decisions through the ASEAN Secretariat. The permanent committees which had hitherto dealt with economic matters were abolished and replaced by five economic

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[28] *Ibid*, Article 3 (1)
[29] See D Irvine, *Making Haste Less Slowly : ASEAN from 1975*, in **Understanding ASEAN**, pp 37-69, at pp 55-6
[30] *Ibid*, p 54

committees responsible to the Economic Ministers[31] and four new committees responsible to the Foreign Ministers through the Standing Committee. Among these four committees, now responsible for the carrying out of work and activities in the area of Functional Cooperation, was the Committee on Science and Technology (COST) which later became initially responsible for ASEAN environmental activities.[32]

Finally, the most recent restructuring of ASEAN came at the Singapore Summit in 1992 "To strengthen ASEAN", the Singapore Declaration establishes triennial meetings of ASEAN Heads of Governments, with informal meetings in between; streamlining of and allocation of more resources to ASEAN organizational structure, especially the ASEAN Secretariat; dissolution of the five economic committees mentioned in the previous paragraph and their replacement by a Senior Economic Officials Meeting (SEOM), responsible for handling all aspects of ASEAN economic cooperation.[33]

In summary, the organizational structure of ASEAN now comprises the Meeting of the Heads of Governments of member countries which is considered the highest authority in the ASEAN structure,[34] the annual meeting of Foreign Ministers; the Standing Committee responsible for the running of the organization's activities; and the ASEAN Secretariat. A substantial part of the work is also done by *ad hoc* committees and committees of specialists and officials established to deal with specific subjects. The ASEAN Secretariat in Jakarta will provide secretariat services to ASEAN's various committees as well as serving as the central administrative machinery for coordination and implementation of ASEAN programmes, projects and activities. In addition to

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31 These were the Committees on Trade and Tourism (COTT), Industry, Minerals and Energy (COIME), Finance and Banking (COFAB), Food, Agriculture and Forestry (COFAF), and Transportation and Communication (COTAC).

32 The other three Committees were on Social Development (COTSD), Culture and Information (COCI), and Budget (COB).

33 *Singapore Declaration of 1992*, Article 8, 31 ILM (1992) 498

34 The meeting of the Heads of Governments is usually called a Summit There have been five ASEAN Summits so far : the 1976 Bali Summit, the 1977 Kuala Lumpur Summit, the 1987 Manila Summit, the 1992 Singapore Summit and the 1995 Bangkok Summit All, except the Kuala Lumpur Summit, resulted in major ASEAN instruments entitled Declarations.

meetings of Foreign Ministers, Ministerial Meetings in specific subjects, such as economic matters, science and technology, agriculture, labour, and environment, are also held for purposes of consultation and deciding on guidelines and actions to be taken in the respective areas. Most important among these is, of course, the meeting of the ASEAN Economic Ministers (AEM) which has been held annually; its meetings are as frequently as, and often more in the limelight than those of the Foreign Ministers. Ministerial meetings are usually preceded by meetings of senior officials.[35]

2.3 ASEAN Economic Cooperation

Since ASEAN has been largely preoccupied with achieving greater economic cooperation, a fair picture of the organization cannot be completed without some reference to its activities in this area.[36] A brief account of ASEAN economic cooperation, which has occupied the central stage in the 1990s, will therefore be given. ASEAN's priority interest in economic matters means that its attention has been diverted from the region's environmental problems.

The period which followed the Bali Summit saw some form of economic cooperation among the ASEAN countries but with minimal success. These included the policy of promoting the development of ASEAN Industrial Projects (AIPs),[37] ASEAN Industrial Complementation Schemes,[38] and the ASEAN Preferential Trading Arrangements

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[35] The most well-known is the ASEAN Senior Economic Officials Meeting (SEOM), but environmental issues are dealt with by the meeting of ASEAN Senior Officials on the Environment (ASOEN) Details of ASOEN's work will be provided in the following section

[36] For discussion on ASEAN economic cooperation, see S Chatterjee, *ASEAN Economic Co-operation in the 1980s and 1990s*, in A Broinowski (ed), **ASEAN into the 1990s**, *supra*, note 14, pp 58-82, and D A Haas, *Out of Others' Shadows : ASEAN Moves Toward Greater Regional Cooperation in the Face of the EC and NAFTA*, 9 **AUJILP** (1994) p 809

[37] Under the agreement to set up AIPs, an industrial project was allocated to each member The host country was required to subscribe 60 percent of the equity capital needed for the project, the remaining 40 percent being provided by the other four countries Of the five AIPs announced following the Bali Summit, only two became fully operational, S Chatterjee, *ibid* , pp 68-9.

[38] *Basic Agreement on ASEAN Industrial Complementation*, (AIC) June 18, 1981, reprinted in 22 ILM (1983) 1299. According to this scheme, private firms in the same industry would specialize in certain products and forego others to achieve greater efficiency and economies of

(PTAs).[39] More recent instruments designed to further economic cooperation followed the meeting of ASEAN Ministers in Manila in December, 1987. These consist of, *inter alia*, an Agreement for the Promotion and Protection of Investments,[40] the Revised Basic Agreement on ASEAN Industrial Joint Ventures,[41] and a Protocol on Improvements on Extension of Tariff Preferences under the ASEAN Preferential Trading Arrangements.[42] Despite the substantial number of instruments providing for economic cooperation, it is generally accepted that ASEAN economic cooperation has contributed little to intra-ASEAN trade.

However the most recent and biggest step advancing intra-ASEAN trade is the establishment of the ASEAN Free Trade Area by the Fourth Meeting of the ASEAN Heads of Government in Singapore in January, 1992. As evident from the Singapore Declaration of 1992,[43] ASEAN considers stronger economic cooperation among its

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scale. In October 1983, the ASEAN Economic Ministers approved one plan proposed by the ASEAN Automotive Federation (AA) to operate under the scheme : this is the only plan currently functions At the end of 1985, the total value of trading involving the products of the only AIC amounted to just over 1 million, Chatterjee, *ibid* , pp 69-70

[39] *The Agreement on ASEAN Preferential Trading Arrangements*, February 16, 1977, reprinted in **Understanding ASEAN**, pp 283-293 The Agreement provided a framework for granting trade preferences, including tariff preferences, to ASEAN-made products. The PTA system did little to increase intra-ASEAN trade, see Haas, *supra*, note 35, pp 818-9, and Chatterjee, *ibid* , pp 65-6

[40] Reprinted in 27 ILM (1988) 612 The Agreement was signed on 15 December, 1987 and upon ratification by the six member states will remain in force for the period of 10 years By this Agreement, the Parties undertake, *inter alia*, to encourage and create favourable conditions in their territories for investments from other Contracting Parties, accord fair and equitable treatment as well full protection and security to investments of nationals or companies of other Parties

[41] Reprinted in 27 ILM (1988) 615 The Agreement was signed on 15 December, 1987 The Parties reaffirmed their desire to collaborate for the acceleration of economic growth in the region A list of ASEAN industrial joint venture (AIJV) products, nominated by each member country and approved by the ASEAN Economic Ministers (AEM) or the Committee on Industry, Minerals and Energy (COIME) as delegated by the AEM, will be drawn up All participating countries must extend a minimum margin of tariff preferences of 90 percent for any AIJV product which has been approved by them

[42] 15 December, 1987, reprinted in 27 ILM (1988) 619. It entered into force on 1 January 1988. The Protocol was designed to improve and extend the PTA system initiated by the PTA Agreement of 1977 by expanding the coverage of the PTA to include items previously excluded or contained in the exclusion lists (a list containing products that are excluded from the extension of tariff preferences under the PTA)

[43] 31 ILM (1992) 498

member countries as necessary in the light of "the profound international political and economic changes that have occurred since the end of the Cold War", and that it must "constantly seek to safeguard its collective interests in response to the formation of large and powerful economic groupings among the developed countries....".[44] The ASEAN Free Trade Area was established using the Common Effective Preferential Tariff (CEPT) Scheme as the main mechanism within a time frame of 15 years beginning on 1 January, 1993 with the ultimate effective tariffs ranging from 0% to 5%.[45] The Singapore Declaration also called for the strengthening of economic cooperation such as in the fields of investments, capital markets, free movement of capital and other financial resources.[46] A ministerial-level AFTA council was created to "supervise, coordinate and review the implementation of the CEPT scheme.[47] The Bangkok Declaration in 1995 stated that ASEAN will "further accelerate the progress towards the actualisation of AFTA before the target date of 2003" and that Member Countries "will maximise the number of items with tariffs reduced to 0-5% ....as well as expand the number of products with tariffs reduced to 0%" by the year 2000.[48] Of significance for our purpose is an express requirement in Articles 7 (5) and (6) of the Singapore Declaration, under the heading of "ASEAN Functional Cooperation", to promotion of sustainable development and environmental cooperation, viz ,

> *The ASEAN member countries shall continue to play an active part in protecting the environment by continuing to cooperate in promoting the principle of sustainable development and integrating it into all aspects of development;*

and

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[44] *Singapore Declaration of 1992*, Article 2, *ibid* , p 499 It is generally understood that the groupings referred to are the EC and NAFTA

[45] *Ibid* , p 501 See also the *Framework Agreement on Enhancing ASEAN Economic Cooperation*, reprinted in 31 ILM (1992) 507, and the *Agreement on the Common Effective Preferential Tariff (CEPT)*, reprinted in 31 ILM (1992) 514. Fifteen groups of products were identified in the CEPT scheme for accelerated tariff reductions

[46] *Ibid*

[47] See the *Framework Agreement .., supra*, note 45, Article 2A (1).

[48] *Bangkok Declaration of 1995*, reprinted in **The Sunday Post**, Bangkok, 17 December 1995, p 20

ASEAN member countries should continue to enhance environmental cooperation, particularly in issues of transboundary pollution, natural disaster, forest fires and in addressing the anti-tropical timber campaign.[49]

It is notable that while the two paragraphs call for greater attention in environmental management, the last phrase of the second paragraph reflects the concern of some ASEAN countries over the ban then imposed by some developed countries on import of tropical timbers considered by them to have been "unsustainably harvested".[50] It also emphasizes the attitudes of some ASEAN countries, in particular Malaysia and Indonesia, which view such unilateral measures as "environmental imperialism".

The above description of ASEAN economic activities helps to demonstrate ASEAN's preoccupation with economic matters and the extent to which priority has been accorded to attempts to move towards a free trade area and economic integration in the region. It reflects the current situation whereunder economic issues receive priority over others, including environmental issues, although, as will be observed in the following section, there is evidence that environmental matters are now being given increasing attention. It is fair to conclude at this stage that most of the *binding* agreements which have been reached are largely concerned with economic cooperation, and that for other areas of cooperation, such as the environment, the instruments involved can be classified more or less as "soft law" which, in contrast to the eagerness demonstrated in economic

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49 *supra*, note 43, p 504

50 The case in point was the introduction by Austria's Parliament in June, 1992 of new legislation concerning tropical timber imports For discussion and comments on the Austrian measures, see Brian F. Chase, *Tropical Forests and Trade Policy . the Legality of Unilateral Attempts to Promote Sustainable Development Under the GATT*, 17 **Hastings ICLR** (1994) p 349 The legislation would increase the import tax on all products made from or containing tropical wood from 8% to 70%, and mandate that all tropical wood imports be labelled in such a way as to inform consumers that they are "made from tropical wood" or "contains tropical wood" and to distinguish between products made from tropical timber that was harvested in a sustainable manner and that which was not It is worth noting that the Austrian legislation imposed no corresponding restrictions on temperate timber extraction Consequently, Malaysia threatened to impose trade sanctions against Austrian imports. In addition, Malaysia filed a complaint with the GATT's Committee on Technical Barriers to Trade alleging unfair discrimination The dispute was resolved by a compromise between Malaysia and Austria in December, 1992. As a result, Austria agreed to rescind the import tax and Malaysia withdrew its complaint before GATT

activities, reflect a relative lack of serious political commitment to environmental matters. The only document which can be regarded as "hard law" in the area of environmental protection is the 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources [51]

3. The Role of ASEAN in Environmental Cooperation

Work on environmental cooperation is carried out mainly by the Meeting of ASEAN Senior Officials on the Environment (ASOEN).[52] Membership of ASOEN consists of six senior officials, one from each member country of the rank of Permanent Secretary, Secretary-General and Director of relevant Ministries [53] ASOEN is assisted by six working groups which meet once a year, namely Working Groups on Nature Conservation (AWGNC), ASEAN Seas and Marine Environment (AWGSME), Transboundary Pollution (AWGTP), Environmental Management (AWGEM), Environmental Economics (AWGEE); and Environmental Information, Public Awareness and Education (AWGEIPAE) [54]

It is difficult to assess how much has been achieved by these working groups. Study of

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[51] 15 EPL (1985) p 64

[52] Initially, work on the environment, which started in 1977 when a draft of the first ASEAN Environmental Programme (ASEP I) was being prepared, fell mainly within the responsibility of the Committee on Science and Technology (ASEAN COST). On the recommendation of COST, the first meeting of the ASEAN Experts Group on the Environment (AEGE) was held in Jakarta on 18-20 December, 1978 It subsequently became a permanent body under COST meeting every year until replaced by ASOEN in 1989 The terms of reference of ASOEN include, *inter alia*, recommending policy guidelines for implementation of the principle of sustainable development, facilitating the incorporation of environmental considerations into programmes and activities of ASEAN committees, monitoring the state of ASEAN's natural resources and the quality of the ASEAN environment, and promoting ASEAN cooperation on environmental matters, see ASEAN Secretariat, **From Strength to Strength - ASEAN Functional Cooperation : Retrospect and Prospect**, Jakarta, November 1993, pp 40-42

[53] See *Report of the First Meeting of the ASEAN Senior Officials on the Environment*, Subang, Selangor Darul Ehsan, Malaysia, 19 June 1990, on file with the writer

[54] Chairmanship of the Working Groups (WG)is on a rotational basis and initially was for a period of three years However, at the Fourth Meeting of ASOEN in 1993, the first term of chairmanship was extended for another year "to ensure continuity" in the work. From April 1994, the chairmanship of the six Working Groups have been assigned as follows . AWGEIPAE - Brunei, AWGASME - Indonesia, AWGEE - Malaysia, AWGNC - Philippines, AWGEM - Singapore, and AWGTP - Thailand

a few reports of the Meeting of ASOEN and Meeting of WGNC reveals that various projects are being proposed, but all of these are subject to availability of funding [55] Despite the number of projects currently proposed by the various working groups, it can be deduced that few projects have actually got to the implementation stage.[56] It is worth noting that most ASEAN environmental projects are proposed with a view of possible funding from ASEAN's "Dialogue Partners".[57] Table 1 concerning financial assistance to environmental projects from some of the major Dialogue Partners from 1979-1992 indicates the limited commitments made by the these funding countries or institutions. It can be seen from the Table that the amount of financial assistance given by ASEAN's Dialogue Partners is still relatively low. This indicates that developed countries need to commit more funds to stimulate further environmental activities within ASEAN. It also signals the reality that ASEAN countries themselves should make more

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55 See for example, *Report of the Fourth Meeting of ASOEN*, 6-8 July, 1993, Bangkok, Thailand, and *Report of the Fourth Meeting of AWGNC*, 12-13 April, 1994, Melaka, Malaysia, on file with the writer In the area of nature conservation, the projects proposed include programme for the establishment of transfrontier parks and other protected areas According to some of the reports, a limited level of joint effort has already been undertaken by Thailand and Malaysia For other projects, however, implementation is still subject to availability of funding These include Management Plans for ASEAN Heritage Parks and Reserves, Training and Assistance; ASEAN Marine Turtle Conservation Program, Action Plan for the In-Situ Conservation of Endangered Species, ASEAN-Australia Wetlands and Waterbirds Project A project for the establishment of an ASEAN Regional Center for Biodiversity Conservation in the Philippines was submitted for possible funding from the EC in 1993 after Japan had declined to give support to the project Project proposals in other areas have also been endorsed by ASOEN A relevant project for the control of air pollution is a Project on Transboundary Pollution of Haze and Acidic Deposition in ASEAN Countries which has been submitted to the ASEAN-Australia Economic Cooperation Program (AAECP) for funding

56 These include the ASEAN-Australia Wetlands and Waterbirds Project which has been allocated A$ 100,000 by the Australian International Development Assistance Bureau (AIDAB) The amount is much lower than in the budget as originally proposed At the Fourth Meeting of ASOEN, it was agreed that the fund would be used to conduct an ASEAN Seminar/Workshop on the subject to be held in the Philippines It is foreseeable that the project will advance little further than the discussion level at the Seminar/Workshop In addition, a Memorandum of Understanding with the USAID has been signed to support an ASEAN-US Environmental Improvement Project Also the WWF has offered a grant of US$ 225,000 to carry out feasibility study on the conservation of biodiversity

57 "Dialogue Partners" is a term used to refer to a number of countries and institutions, "usually more economically-developed countries", which have entered into dialogue or cooperative relationship with ASEAN There are at present eight Dialogue Partners, namely Australia, Canada, the European Community, Japan, New Zealand, Republic of Korea, the U S and UNDP

efforts to allocate funds for environmental purposes, rather than depending solely on funding from outside sources

Table 1 Contribution of Dialogue Partners to ASEAN Programmes/Projects on Environment, 1979-1992 (in thousands)

Programme/Project	Australia		EC	USA
UNDP	(A$)	(ECU)	(US$)	(US$)
Transboundary Pollution	-	40	-	1227
Environmental Management	304	-	3250	555
Environmental Economics	-	-	-	-
Nature Conservation	-	-	-	-
ASEAN Seas and Marine Environment	3500	-	-	-
Environmental Education	-	-	-	120
Total	3804	40	3250	1902

Source : ASEAN Secretariat, **From Strength to Strength**, 1993, p 49.

3.1 The ASEAN Agreement on the Conservation of Nature and Natural Resources 1985

The Agreement has been regarded as one of the most comprehensive documents incorporating an integrative approach to the management of all environmental sectors. The details of the substantive provisions of the Agreement have been discussed in Chapter 4 and thus will not be repeated here. However, the Agreement has not entered into force and thus cannot be expected to have any practical impact on ASEAN's environmental activities in the near future. Judging from the small amount of attention given and references made to it at present,[58] it will probably remain a "sleeping treaty"

[58] Interestingly, it is not discussed or mentioned at all in the special issue on the environment of the **ASEAN Update**, March 1994. Also during the course of interviews conducted by the writer with a few officials responsible for coordinating ASEAN's environmental activities in the relevant Departments in Thailand, it appeared that not all of them were familiar with the name of the Agreement, and some did not even know anything about it

for a long time. In addition, it is worth noting that at its third Meeting in 1992 the ASEAN Working Group on Nature Conservation, in considering the implementation of the Agreement, agreed that "the original proposal prepared in coordination with the IUCN was found to be *too rigid and not implementable* due to differences of national laws pertaining to nature conservation amongst ASEAN countries", and recommended that "each ASEAN countries conduct studies of existing legislation and send their reports to IUCN for the purpose of amending the Agreement into *an acceptable form for implementation*" (emphasis added) [59] Therefore, the Agreement in its present form may arguably have no prospect of entry into force at all.

With the exception of the 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources, all substantive provisions for ASEAN policies and programmes are constituted in resolutions and declarations produced from various ASEAN Ministerial Meetings on the Environment (AMME) and Meeting of the Heads of Governments or Summits. There have been six major statements of this kind so far. In addition to these resolutions and declarations, there have been a series of ASEAN Environmental Programmes (ASEP I-III) and most recently an ASEAN Plan of Action on Environment. A brief summary of all these documents is necessary to illustrate the scope and limitations of ASEAN's role in environmental issues before evaluating ASEAN's contribution to the achievement of sustainable development.

3.2 ASEAN Ministerial Declarations on the Environment

(1) The Manila Declaration on the ASEAN Environment, 1981

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[59] See *Report of the Third Meeting of the ASEAN Working Group on Nature Conservation* (WGNC), held in Bandar Seri Bengawan, Brunei, 17-18 November, 1992; and also *Report of the fourth Meeting of WGNC*, held in Melaka, Malaysia, 12-13 April, 1994; on file with the writer A volume of country reports, prepared with funding from the EC, was completed in 1994, see IUCN, **Legislation for Implementation of the ASEAN Agreement on the Conservation of Nature and Natural Resources, Country Reports**, April 1994. It is worth noting that the Reports were intended to facilitate evaluation of existing national laws in ASEAN countries with a view to adapting those laws to the requirements of the ASEAN Agreement's provisions Apparently ASEAN views the exercise differently

The first ASEAN Ministerial Meeting on the Environment (AMME)[60] was held in Manila on 30 April, 1981, although, as mentioned above, environment was not explicitly spelled out in ASEAN's mandates in the area of functional cooperation until the Manila Summit in 1987. The result of this first Ministerial Meeting was the 1981 Manila Declaration on the ASEAN Environment[61] (not the Manila Declaration of 1987 which was the product of the third ASEAN Summit). The objective of the Declaration was stated to be "to ensure the protection of the ASEAN environment and the sustainability of its natural resources so that it can sustain continued development with the aim of eradicating poverty and attaining the highest possible quality of life for the people of the ASEAN countries".[62] Among the policy guidelines enumerated by the Declaration are policies to "foster a common awareness among the people of the ASEAN countries " of the vital significance of the environment for sustained development, "to ensure, *as far as practicable*, that environmental considerations are taken into account in development efforts. " (emphasis added); "to encourage the enactment and enforcement of environmental protection measures in the ASEAN countries"; and "to foster the development of environmental education programmes".[63] The Declaration also endorsed the implementation of ASEP I[64] which covered the period from 1978 to 1981 and even recommended the establishment of an ASEAN Committee on Environment.[65]

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[60] The ASEAN Ministerial Meeting on the Environment (AMME) is scheduled to recur regularly once every three years So far, AMME has been convened six times, the latest one being in Bandar Seri Begawan, Brunei Darussalam on 25-26 April, 1994

[61] Reproduced in **From Strength to Strength**, *supra*, note 52, p 107

[62] *Ibid*, Article 1 (a)

[63] *Ibid*, Article 1 (b)

[64] *Ibid*, Article 2 A draft of the ASEAN Sub-Regional Environment Programme (ASEP) was prepared in 1977 with the assistance of UNEP It was considered by AEGE in 1978 ASEP I (1978-1982) described the extent of regional cooperation and listed the different priority areas, projects and activities on the environment The priority areas listed were environmental management, including EIA; nature conservation and terrestrial ecosystems, industry and environment, urban environment, marine environment, and environmental education, training and information. A number of projects and activities were listed under each programme and there were altogether 101 projects or activities under ASEP I However, only 15 projects were actually implemented under ASEP I These include, *inter alia*, 5 technical workshops, 1 study tour, and several projects such as quantification of environmental parameters, soil erosion control, pollution control technology, and action plan on environmental education and training See **From Strength to Strength**, *supra*, note 52, p 42.

[65] *Ibid*, Article 3 The work on the environment was then coordinated through a body called

(2) The Bangkok Declaration on the ASEAN Environment, 1984

The 1984 Bangkok Declaration on the ASEAN Environment[66] is the second instrument along these lines. The objective of the Declaration was stated at length as "to implement the **ASEAN Development Strategy** (*sic*) through an integrated approach entailing advance or forward planning in the environmentally related activities with a view to incorporating an environmental dimension in development planning right at the base level in order to achieve sustained development and long term conservation of environmental assets and at the same time improving the quality of life for all".[67] The Declaration provided more concrete policy guidelines for environmental management Noteworthy among these are the strengthening of the use of the Environmental Impact Assessment (EIA) process and extended Cost-Benefit Analysis for minimizing adverse effects,[68] development of a system of procedures for conducting EIAs and for their review which can be practically utilized within the ASEAN region;[69] development of new and practicable approaches for preserving forests, wildlife, and other ecological systems;[70] development of practicable methods for the management of pollution discharges into the marine environment,[71] adopting practicable methods for control of waste discharges from industry, low waste or non-waste technology, more effective re-use and recycling of waste in production and developing a toxic and hazardous waste control programme,[72] provision of central sewage treatment facilities in major towns;[73] enhancement of public awareness in environmental protection including introduction of

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the ASEAN Experts Group on the Environment (AEGE) under the ASEAN Committee on Science and Technology (ASEAN COST) AEGE was replaced by ASEAN Senior Officials on the Environment (ASOEN) in 1989, see *supra*, note 61

66 Adopted 29 November, 1984, reproduced in **From Strength to Strength**, *supra*, note 52, p 109.

67 *Ibid*

68 *Ibid*, Policy Guidelines (1) (ii)

69 *Ibid*, (1) (iii).

70 *Ibid*, p 110, Policy Guidelines (2)

71 *Ibid*, (3)

72 *Ibid*, (4) (i) (ii) and (iii)

73 *Ibid*, (5)

stronger environmental themes into school and university syllabi, provision of environmental training of personnel involved in decision-making on projects, programmes, policies and plans, as well as technical training for staff engaged directly in the work of environmental protection.[74] Recommendations are also made for the development of a comprehensive environmental system within ASEAN through establishment of national data banks, monitoring programmes for continuing surveillance of sensitive environmental resources and increased use of remote sensing as a means of establishing environmental data bases.[75] Lastly, the Meeting decided to adopt and implement ASEP II.[76]

(3) The ASEAN Declaration on Heritage Parks and Reserves, 1984

The same Ministerial Meeting in Bangkok adopted an ASEAN Declaration on Heritage Parks and Reserves.[77] The Declaration lists 11 national parks and reserves in Member

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74 *Ibid*, (6) (i) (ii) (iii) and (iv)

75 *Ibid*, (7) (i) (ii) (iii) and (iv)

76 *Ibid*, p 110 ASEP II (1983-1987) retained the six programme areas of ASEP I and added remote sensing as a new priority area. ASEP II emphasised the promotion of demonstration projects to solve immediate regional needs, the formulation of action plans and programmes for all priority areas, and the strengthening of regional collaboration The uncompleted projects under ASEP I were carried over to ASEP II and another 22 projects were implemented under ASEP II At least 14 projects were not implemented at all under ASEP I and ASEP II, and 32 projects were carried over from ASEP II to ASEP III, **From Strength to Strength**, *supra*, note 52, p 43

ASEP II was succeeded by ASEP III (1988-1992) Various ASEAN publications contain identical descriptions of ASEP III ASEP III is said to have an overall objective of promoting "the proper management of the ASEAN environment so that it can sustain continued economic development while maintaining a high quality of life for the people of the ASEAN countries" This was to be achieved through an immediate objective of further strengthening "the regional institutional framework and organizational structure of ASEAN" There were 17 "programme goals" and 60 regional projects under ASEP III divided into six priority programme areas as ASEP I and II On the basis of set criteria such as evaluation of the projects' goals (of sustainable development) and availability of funding, twelve very high priority projects were selected For details, see **From Strength to Strength**, *supra*, note 52, pp 45 and 48. It is not clear how many projects were completed under ASEP III although it was stated that the Programme aimed to complete 90% of its 60 projects However, even assuming that all the projects were completed (an unlikely event given the limited number of projects completed under ASEP I and II), their tangible results are said to be limited to the production of 5 guidelines, two manuals, 1 textbook, 6 management plans, and three sets of teaching visual aids, see **ASEAN Strategic Plan of Action**, *infra*, note 103, pp 21-2

77 Adopted 29 November, 1984 Reproduced in **From Strength to Strength**, *op cit*, Annex A, p 108

Countries as "ASEAN national heritage parks and nature reserves".[78] The Member Countries agreed that "a common cooperation is necessary to conserve and manage such parks and reserves" and that such cooperation included "setting up of regional conservation and management action as well as a regional mechanism complementary to and supportive of national efforts at implementation of conservation measures".[79] It is not clear what would result from listing a particular site as an ASEAN national heritage park or reserve. In the case of Thailand, for example, conservation measures are carried out by the RFD much in the same way as before. In other words, it is difficult to see what difference it makes to be listed as an ASEAN national heritage park or reserve.[80]

(4) The Jakarta Resolution on Sustainable Development, 1987

The Jakarta Resolution on Sustainable Development[81] was adopted at the third AMME held in Jakarta in 1987. A new feature which may distinguish this resolution from earlier statements is the emphasis put on the *right to development* of the ASEAN countries and on consideration of the principle of intergenerational equity in the utilization of natural resources The preamble asserted that "it is *imperative* for the peoples of ASEAN *to continue and accelerate their development processes* in order to meet their growing needs and to provide them with a quality of life in accord with their dignity and well-being" (emphasis added) It was also stated that the ASEAN countries were mindful that in utilizing their natural resources "to meet the needs of the present generation, *the ability of future generations to meet their needs should not be imperilled*" (emphasis added).[82] Again, it was reiterated that sustainable development required that

[78] These consist of one site in Brunei, three in Indonesia, three in Malaysia, two in Philippines, and two in Thailand In the case of Thailand, they are Khao Yai National Park and Kor Tarutao National Park

[79] *Ibid*

[80] Apparently, only one project to set up management plans for Mt Iglit-Baco and Mt Apo National Parks in the Philippines (which have been listed as ASEAN national heritage parks and reserves) has been formulated in order to request funding from the GEF, the World Bank, and the EC Yet even this project is not listed among the ASOEN ongoing projects, and presumably, therefore, it has not got to the implementation stage

[81] Adopted 30 October, 1987, reproduced in **From Strength to Strength**, *supra*, note 52, p 121

[82] *Ibid*

"development processes and environmental management be conducted in an integrated manner".[83] The Resolution recommended the establishment of a regional body on the environment whose tasks would include recommending policy guidelines on the implementation of the principle of sustainable development; facilitating the incorporation of environmental considerations into the programmes and activities of ASEAN committees, monitoring the quality of the environment and natural resources to enable the periodic compilation of ASEAN state of the environment reports; and enhancing the cooperation on environmental matters.[84] The assertion of the right to development and the recognition of the principle of intergenerational equity in this Resolution accorded with the development of the sustainable development concept enunciated at the UNCHE Declaration and subsequently confirmed in the Rio Declaration.

(5) The Kuala Lumpur Accord on Environment and Development, 1990

At the 4th AMME held in Kuala Lumpur in June 1990, the ASEAN Ministers for the Environment adopted the Kuala Lumpur Accord on Environment and Development [85] In the preamble, it was repeated that the pursuit of sustainable development was "imperative" to secure the well-being of the people of ASEAN in the future [86] The Ministers agreed "*to initiate efforts* leading towards concrete steps" pertaining to environmental and natural resource management,[87] and "*to initiate efforts* enabling the inclusion of environmental factors into economic calculations....." (emphasis added) [88] A more interesting new element in the Kuala Lumpur Accord was the formulation of a "common ASEAN position" to be presented in various fora including UNCED. This

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[83] *Ibid*

[84] *Ibid*, Article IV (a) (b) (c) and (d)

[85] Adopted 19 June, 1990, reproduced in **From Strength to Strength**, p 122.

[86] *Ibid.*, Para 1

[87] *Ibid*, Articles 1 and 2 These steps include, *inter alia*, the formulation of an ASEAN strategy for sustainable development, the harmonisation of environmental quality standards, transboundary pollution prevention and abatement practices, and approaches in natural resource assessment, undertaking of research and development and the promotion of the use of clean technologies

[88] *Ibid*, Article 3.

position, as articulated, brought out clearly for the first time, as far as an ASEAN statement on sustainable development is concerned, the North-South issues both in terms of international economic relations and the "equitable" sharing of responsibilities for the rectification of global environmental problems. In affirming ASEAN's commitment to the pursuit of sustainable development, the Accord reiterated "the urgency for a *supportive and predictable international economic environment* which promotes economic growth and development of all countries" and stressed "the need for *equitable sharing of responsibilities and allocation of liabilities* in global environmental efforts" (emphasis added).[89] The Accord also called for "*substantial additional resources*" to assist developing countries to pursue their goals of sustainable development, and "access to, and transfer of, environmentally sound technologies *at affordable costs* and the establishment of appropriate funding mechanisms" (emphasis added) [90] As can be seen from previous chapters, this position characterised the negotiating process of nearly all recent environmental treaties, including all the major documents at UNCED. This identification of the ASEAN common position is therefore important as representing a regional stand on strategies to tackle global environmental problems as well as to the development of international environmental law in the future. It also signifies the fact that these concerns must be properly addressed in order to achieve a satisfactory level of environmental conservation in developing countries

(6) The Singapore Resolution on Environment and Development, 1992

At the fifth AMME held in Singapore in February 1992, just prior to UNCED, the Ministers adopted the Singapore Resolution on Environment and Development.[91] The Resolution repeated various previous statements on sustainable development. The preamble recognised that "natural resources and environmental accounting and valuation of environmental and ecological factors are essential to the successful pursuit of

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[89] *Ibid*, Article 4 (a) (e) and (f)
[90] *Ibid*, Article 4 (h)
[91] Adopted 18 February, 1992, reproduced in **From Strength to Strength**, *supra*, note 52, pp 123-124

sustainable development".[92] This is worth noting as it implies that ASEAN countries are aware of the need to internalize environmental costs into their developmental process, which thus may weaken some of the arguments made in favour of countervailing duties in developed countries to offset the competitive advantages derived by developing countries from externalisation of environmental and ecological costs As some of the ASEAN countries, such as Malaysia and Thailand, have achieved a certain level of economic growth, there is an increasing realisation among economists as well as environmentalists that externalisation of environmental costs encourages unsustainable use of natural resources and, in some cases, may be seen as subsidizing the enjoyment by consumers abroad of cheaper products. An emerging view in Thailand, as mentioned in the previous chapter, is that there is now a need to employ more economic instruments, particularly to enable application of the polluter pays principle, in regulating the use of common goods such as the air and other natural resources.

Other statements contained in the Singapore Resolution are mostly rhetorical, avowing closer cooperation without any concrete time frame for implementation. The Ministers agreed to "intensify cooperation in environmental management and protection in their common pursuit of sustainable development. In this regard, member countries shall work collectively towards the improvement of environmental quality, harmonization of standards, and jointly promote the application, transfer and development of appropriate environmental technologies".[93] In setting out policies to enhance regional cooperation, the member countries agreed, *inter alia*, to cooperate in setting national basic environmental quality standards and regulations, to work towards harmonized environmental quality standards in the region, and to adopt long term quantitative goals relating to ambient air quality and river water quality [94] Consideration was given to the problems of transboundary pollution as the member countries undertake to harmonize

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[92] *Ibid.*, para 4
[93] *Ibid*, p 123
[94] *Ibid*

policy directions and increase operational and technical cooperation on environmental matters such as transboundary air and water pollution, natural disasters, forest fires, oil spills, and the transboundary movement of toxic chemicals and hazardous wastes and to take joint actions to address the anti-tropical timber campaign.[95] Once again, the inclusion of the clause calling for solidarity against the anti-timber campaign was an attempt to accommodate economic (and perhaps also political) concern at what is seen by developing countries as the use of non-tariff barriers in developed countries to impose environmental conservation measures on them. It can be expected that on political and economic issues like this, ASEAN is capable of taking a unified stance against the outside threat from the more economically powerful developed countries On institutional development, the member countries agreed to cooperate in building up the capacity of their national institutions responsible for the environment through regional training assistance programmes, regular exchange of information and management data and greater exchange of visits among officials and experts.[96] This commitment is perhaps among the more realistic undertakings, provided that sufficient resources, especially financial resources, are allocated to it.

Finally and importantly, the Resolution contained a section addressing specifically "development and global environmental issues". An ASEAN common stand on UNCED and related issues (annexed to the Resolution) was adopted.[97] The statement on the Common Stand covered various areas of the global environmental problems then being discussed during the preparatory process for UNCED. On the issue of climate change, the statement called for stabilization of and the setting of a limit on the emissions of all greenhouse gases by developed countries; reduction in greenhouse gases on an "equitable basis"; "adequate, new and additional funding" by developed countries; available technologies to reduce CO_2 emissions on "concessional and preferential

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95 *Ibid*

96 *Ibid*

97 *Ibid*, p 124 The text of *the ASEAN Common Stand* is also reproduced separately in **From Strength to Strength**, *supra*, note 52, pp 46-48

terms",[98] and provided that any amendments to the Montreal Protocol must include adequate provisions to ensure that the compliance procedure would not apply until the required technologies become freely and commercially available on a concessional and preferential basis.[99] On the forests issue, it was asserted that countries "have the sovereign right to develop on a sustainable basis their forests in accordance with their needs and levels of socio-economic development" and that developed countries "should cease all forms of unilateral measures to ban the importation of tropical timber ..".[100] As far as the conservation of biodiversity is concerned, recognition must be given to the sovereign rights of states over their natural and genetic resources. Funding mechanisms should be established "to compensate developing countries for their sacrifices and opportunity costs foregone for conserving biological diversity".[101] Access to biological diversity should be based on mutually agreed terms and the principle of prior-informed consent" and transfer of relevant technologies should be on concessional and preferential terms [102]

The language in the previous paragraph and throughout the ASEAN Common Stand is not new or surprising to those familiar with the outstanding issues leading up to UNCED and thereafter. In fact, many of the provisions called for have been realised, at least in written form, in nearly all the major documents that emerged from UNCED As stated earlier, what is significant is the emergence of the regional policy that ASEAN will have in any future negotiation and implementation of international environmental instruments. The issues and concepts developed, such as on North-South economic relations, as well as common but differentiated responsibilities, are bound to play an important part in any commitments ASEAN may make to undertake conservation measures The eventual membership in ASEAN of Laos, Cambodia and Myanmar (as

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98 *ASEAN Common Stand, Ibid* , Article 1
99 *Ibid.*, Article 2
100 *Ibid* , Article 5.
101 *Ibid* , Article 6, para 1
102 *Ibid* , Para 2.

Vietnam has already done) will also add weight to the organization's position in this regard

(7) The Bandar Seri Begawan Resolution on Environment and Development, 1994

The most recent statement from ASEAN on the issue of environment and development is the Bandar Seri Begawan Resolution on Environment and Development of April, 1994.[103] In the preamble, the Resolution recognised that "international and regional cooperation and efforts are necessary to support the national and regional implementation of Agenda 21". The necessity for regional cooperation in the management and control of transboundary movements of hazardous wastes into and within the ASEAN region is singled out in the preamble and it is worth noting that no mention is made of the problems concerning transboundary air pollution or the conservation of biodiversity, including that of the forests Apart from declaring 1995 as the ASEAN Environmental Year, the most important consequences of the Resolution is the adoption of the ASEAN Strategic Plan of Action on the Environment covering the period from 1994 to 1998, and, for the first time, provision of a set of harmonised environmental quality standards for ambient air and river water quality to be implemented by the year 2010. These two documents will be considered below.

(a) The Strategic Plan of Action on the Environment [104]

This document is a result of eight-months of work undertaken by the ASEAN Secretariat with the assistance of ESCAP and UNEP.[105] The Strategic Plan may be regarded as a continuation of the previous three ASEP programmes [106] The Plan

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[103] Adopted 26 April, 1994, reprinted in ASEAN Secretariat, **ASEAN Strategic Plan of Action on the Environment**, July 1994, pp 63-65

[104] **ASEAN Strategic Plan of Action on the Environment**, *ibid*

[105] See **ASEAN Update**, March 1994, p 9 The first draft of the action plan was prepared with the assistance of the ESCAP Regional Adviser on environment management UNEP subsequently funded visits by an ASEAN expert to member countries to conduct further consultations for the second draft A third draft was finally completed after circulation to member countries for further comments

[106] See *supra*, note 76 ASEP I covered the period from 1978 to 1981. This was followed by ASEP II (1982-1987) and ASEP III (1988-1992)

consists of five sections The first two sections mainly describe the various declarations and resolutions on the environment adopted by ASEAN including a brief review of the three ASEP programmes The last subsection of the second section provides a short two-paragraph assessment of ASEAN achievements in this area. It is asserted that the development and evolution of the ASEP programmes "provided a solid basis and further enhanced regional environmental cooperation". Although it is questionable whether ASEAN cooperation has been a significant factor in the development of national environmental agencies in member countries, this is said to be the ASEP programmes most significant contribution [107] However, it is recognised that much work has still to be done and most of the projects carried out were uncoordinated, thus undermining their long term contribution to ASEAN objectives. Inadequacy of funding and institutional deficiencies are also identified as shortcomings [108]

The central content of the Strategic Plan is in Section 3 which contains new directions, objectives and strategies In projecting new directions, the Plan makes special reference to AFTA, the ASEAN common stand on UNCED and the Agenda 21 programmes that are relevant to ASEAN [109] As far as AFTA is concerned, it is envisaged that AFTA would pose "a potential development dilemma" because increased intra-ASEAN trade will lead to more intensive exploitation of resources and the release of greater quantities of pollutants into the atmosphere as a result of increased manufacturing activities [110] The objectives of the plan and the ten strategies to be pursued to attain the objectives are set out in Subsections 3 2 and 3.3.[111] Subsection 3 3 contains ten strategic thrusts, each

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107 *Ibid* , Section 2 5, p 22
108 *Ibid* , p 23
109 *Ibid* , pp 23-25
110 *Ibid* , p 24
111 *Ibid* , pp 25-42 Five objectives are listed These are ·
(a) to respond to specific recommendations of Agenda 21 requiring priority action in ASEAN,
(b) to introduce policy measures and promote institutional development that encourage the integration of environmental factors in all developmental processes both at the national and regional levels,
(c) to establish long term goals on environmental quality and work towards harmonised environmental quality standards for the ASEAN region,

accompanied by supporting actions totalling 27 actions. The ten strategic thrusts are namely, supporting the development of a regional framework for integrating environment and development concerns in the decision making process,[112] promoting governmental-private sector interactions that lead towards the development of policies that mutually support the thrusts of each sector; strengthening the knowledge and information data base on environmental matters; strengthening institutional and legal capacities to implement international agreements on environment; establishing a regional framework on biological diversity conservation and sustainable utilization of its components; promoting the protection and management of coastal zones and marine resources, promoting environmentally sound management of toxic chemicals and hazardous wastes, and control of transboundary movement of hazardous wastes; developing a system for the promotion of environmentally sound technologies; promoting regional activities that strengthen the role of major groups in sustainable development; and strengthening the coordinative mechanism for the implementation and management of regional environmental programmes.

On the issue of integration of environment into development, it is worth noting that although the Strategic Plan deems it desirable to integrate environmental dimensions into the work of various ASEAN committees and bodies, the giving of such an undertaking is expressly stated to be "difficult at this stage" given the complexity of the organizational structure and the limited technical and infrastructural support available from the ASEAN Secretariat.[113] This exclusion is hard to understand as it can clearly be argued that ASEAN organizational structure is not all that complex when compared

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(d) to harmonise policy directions and enhance operational and technical cooperation on environmental matters, and undertake joint actions to address common environmental problems, and

(e) to study the implications of AFTA on the environment and to take steps to integrate sound trade policies with sound environmental policies

112 Among the supporting actions recommended are increasing efforts towards the harmonisation of EIA procedures and preparation of guidelines to develop a system of Integrated Natural Resources and Environment Accounting (INREA) which would integrate environmental and social dimensions into the existing systems of national economic accounting

113 *Ibid*

to other regional organizations.

Section 4 of the Strategic Plan deals with institutional and financial mechanisms [114] Essentially it calls for the strengthening of the capacity of the ASEAN Secretariat through support by multilateral agencies to enable it to increase its staff and to ensure the implementation of the Strategic Action Plan. Finding ways of financing the Plan is seen as a major constraint on its implementation. Enumerated possibilities for funding include cost-sharing arrangements among member countries, *the feasibility of which is to be studied by the ASEAN Secretariat* (emphasis added); the use of the existing ASEAN Fund,[115] the ASEAN Sub-regional Environmental Trust (ASSET),[116] and finally project-related funds which include funding from "Dialogue Partners",[117] the GEF, and the Asia Sustainable Development Fund [118]

(b) ASEAN Harmonized Environmental Quality Standards

The second document adopted by the Bandar Seri Begawan Resolution on Environment and Development is a set of Harmonised Environmental Quality Standards for ambient air and river water quality to be implemented by the year 2010 [119] This is a short one-

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[114] *Ibid*, pp.43-46

[115] *Ibid*, p 44 The ASEAN Fund was established in 1969 to finance collaborative projects, programmes and activities approved by the ASEAN Foreign Ministers The Fund is required to give priority to "urgent, short-term activities of a strategic or confidential nature and which are considered fundamental in building a stronger cooperative ASEAN infrastructure" The Fund would initially consist of US$ 6 million, with a contribution of US$ 1 million from each member country Since its establishment, the Fund has remained largely unutilized owing to the "complex and cumbersome procedures" stipulated in the 1969 Agreement governing the Fund

[116] The establishment of ASSET has been proposed by WWF which has been authorized by ASEAN to negotiate with prospective donors for the setting up and implementation of ASSET.

[117] It is observed in the Plan that currently the percentage of funds earmarked for environmental programmes by the Dialogue Partners against their total contribution to the Functional Cooperation programmes and projects have been very low, e g 6% from Australia, 9% from the U S and 12 % from UNDP, the total contribution from each being A$ 68 8 million, US$ 34 9 million and US$ 16 million respectively, see **ASEAN Strategic Plan of Action**, *supra*, note 103, p 45, and **From Strength to Strength**, *supra*, note 52, pp 10-11

[118] As described by the Plan, this is a Fund set up by the Asian Development Bank The amount of the Fund is US$ 100 million to be invested in companies undertaking sustainable development projects in the Bank's developing and newly-industrialized member countries, **ASEAN Strategic Plan of Action**, *ibid*, p 46

[119] The document is reproduced in **ASEAN Strategic Plan of Action on the Environment**,

page document which sets out the long-term goals for both ambient air quality and river water quality, with no reference to any short-term or provisional measures. The standards prescribed are very broad and minimum and thus can hardly be expected to create any significant impacts on regional environmental quality. For ambient air quality, the long-term goal is provided as follows :

> *To achieve an ambient air quality below 100 Pollutant Standards Index (PSI) by the year 2010 with priority on urban and industrialised areas.*

For river water quality; it is as follows :

> *To achieve the following river water quality by the year 2010 with priority on urban and industrial areas :*
> *pH : 6 0 to 8 5*
> *DO : 2 mg/l or more*
> *BOD : 10 mg/l or less*
> *TSS : 200 mg/l or less*

It can be seen clearly from the standards set out above that the ASEAN harmonised environmental quality standards represent only a broad framework with no detailed parameters for measurement or actual control over air and water quality. Given the repeated calls in earlier Declarations and Resolutions for harmonised environmental quality standards, this set of environmental standards, as finally adopted, is somewhat disappointing but not surprising considering the small amount of political commitment accorded to ASEAN's role in environmental matters. Furthermore, in view of the fact that more detailed standards have probably already been adopted at national levels (for example, in Thailand), albeit with lax implementation, the ASEAN standards could not be regarded as anything but a symbolic gesture to demonstrate some willingness to cooperate regionally on environmental issues They certainly mark the fact that ASEAN has a long way to go before meaningful, harmonised environmental standards can be achieved. Perhaps the striking difference between ASEAN and the EC in this regard (see chapter 8) is that originally the EC's efforts towards achieving harmonised environmental standards were largely driven by the desire to eliminate distortions in

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p 87.

trade among its member countries or to prevent different national environmental standards from creating "unfair" competitive advantages for countries with lower standards, although since the 1980's the EC environmental policies have had a clear legal basis in their own right. It may be said that at present the amount of intra-ASEAN trade is not big enough to generate that drive, and in future, as trade among ASEAN member countries increases, especially as a consequence of AFTA, more political interest will be given to harmonisation of national environmental laws.

4. Conclusions

The general picture which can be drawn of ASEAN cooperation in environmental matters to date is one characterised by a "soft-law" approach with no real commitment to action. The implementation of the ASEP I-III may indicate some interest by the organizations concerned in environmental cooperation, but as most of the projects remain uncompleted at the conclusion of the programmes and there also is a lack of coordination and follow up on the projects, the contributions made by the three ASEPs towards environmental improvement or cooperation in the region should not be overstated The most recently adopted ASEAN Strategic Plan of Action, which is to be in operation from 1994 to 1998 may raise some hope for real actions. But again, although the Plan is supposed already to have started, it does not appear that there has been any substantial action on relevant environmental activities apart from the designation of 1995 as the ASEAN Environmental Year [120] This rough assessment may be regarded as unfair especially by officials engaged in ASEAN's environmental

[120] The declaration of 1995 as the ASEAN Environmental Year, proposed by Thailand, was agreed at the 4th Meeting of ASOEN held in Bangkok, Thailand during 6-8 July, 1993. The objectives of such designation are stated to be, *inter alia*, to : highlight ASEAN environmental issues and cooperation programmes in order to stimulate awareness on these issues among the ASEAN populace; broaden the participation process in the environment in ASEAN, stimulate regional activities in the environmental area, and to coordinate with donor countries and international organizations for cooperation in the launching of major ASEAN environment programmes in that year Activities envisaged, at both national and regional levels, consist of organization of various regional workshops and meetings, exhibitions, television documentary and publications, a Logo for the ASEAN Environmental Year Competition, national Expos on environmentally friendly products, and preparation of handbooks on the environment for primary and secondary school teachers etc See **ASEAN Update**, March, 1994, p 17.

activities whose work has been continuously carried out through ASOEN and its various working groups with little publicity However, it can be argued that more is needed than the routine administration of fragmented programmes and projects It is worth noting that throughout financial problems have been stressed as obstructing ASEAN's implementation of environmental projects and programmes, including the current Strategic Plan: it is notable that even the travel expenses of an ASEAN expert who visited various member countries to conduct consultations during the Plan's preparation had to be funded by UNEP. While this can be justified by ASEAN's limited financial resources, the lack of willingness on the part of its member states to allocate the necessary resources cannot be denied Though the implementation period for the ASEAN Strategic Plan has now begun to run, the ASEAN Secretariat is still at the stage of studying the feasibility of cost sharing arrangements among member countries, while other sources of funding remain largely speculative. It is, therefore, questionable how much will eventually be achieved when the Strategic Plan is finally concluded.

However, there is some evidence to support the observation that when environmental activities really pose a threat to the region, ASEAN States are capable of forming more effective cooperation, examples can be found in the promotion of cooperation in the management of fisheries and controlling marine pollution from oil tankers These include the 1983 ASEAN Ministerial Understanding on Fisheries Cooperation, signed at Singapore, on 22 October, 1983[121] and the ASEAN Contingency Plan for the Control

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121 This instrument provides that ASEAN States will take the necessary actions for closer cooperation, *inter alia*, in the management and conservation of fisheries resources in the EEZs of the region through exchanging fisheries information and expertise relevant to fisheries development and management, coordinating action in fisheries resources research activities undertaken by national institutions, undertaking appropriate action in the evaluation and management of shared stocks and migratory species in the ASEAN region, undertaking appropriate action for the rational utilization of the fisheries in EEZs, and closer cooperation in working towards a common stand and understanding on regional and international matters in fisheries. It has been observed that since cooperation among coastal States in their EEZs is not provided for in detail by the 1982 Convention on the Law of the Sea, this Ministerial Understanding represents an important development of regional cooperation in the management of the marine resources, see S Kasemsuvan, **The Law of the Sea and ASEAN States : Maritime Arrangements of ASEAN States in the Malacca Straits, Gulf of Thailand and**

and Mitigation of Marine Pollution in 1975.[122] Another example is the 1977 Tripartite Agreement on Safety of Navigation in the Strait of Malacca between Malaysia, Indonesia and Singapore [123] More recently, a Memorandum of Understanding on Oil Pollution Preparedness and Responses was adopted in 1992 and became enforceable "on the date of each signature".[124] By this Memorandum of understanding, the ASEAN countries agreed to use the ASEAN Oil Spill Response Action Plan (ASEAN OSRAP) as a basis for co-operation "at the operational level" and to promote its implementation.[125] The areas covered by ASEAN-OSRAP include all waters within

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the South China Sea, PhD thesis, University of London, 1987, pp 620-21

[122] This Contingency Plan was produced in 1975 by the ASEAN Experts Group on Marine Pollution. It focused on pollution from tankers It was envisaged as a means of providing for effective reporting to alert member states in the event of marine pollution from tankers and of creating awareness of the anti-pollution capabilities. The schemes were adopted by an IMCO (as it then was) Resolution and became enforceable on 1 May, 1981.

[123] The Agreement was prompted by the *Showa Maru* incident in January 1975 The *Showa Maru* hit a rock and spilled approximately 3,380 tonnes of oil into Indonesian and Singaporean waters The cost of cleaning-up or compensating for damages to the waters, the coasts and the ecology was estimated to be over US$ 26 million (calculated from Malaysia, Singapore and Indonesia's claim for damages), see K L.Koh, **Straits in International Navigation**, Oceana, Dobbs Ferry, New York, 1981, p 78 The Agreement was signed on 24 February, 1977. It prescribed a traffic separation scheme in three specified areas of the Strait of Malacca and Singapore Deep draught vessels were required to navigate through the deep water route

[124] Adopted on 20 May, 1993 in Tokyo, on file with the writer All member states, except Malaysia, signed on that date Malaysia subsequently signed the Memorandum on 31 January, 1994 A Memorandum of Understanding is a form of informal international instrument, which has sometimes been described as a "gentleman's agreement" or "non-legal agreement". It is usually, as in the case of ASEAN, concluded between senior governmental officials of the States involved and binding informally On the legal status and practice of informal international instruments, see A Aust, *The Theory and Practice of Informal International Instruments*, 35 **ICLQ** (1986) p 787 "Informal instrument" is defined as "an instrument which is not a treaty because the parties to it do not intend it to be legally binding" It is usually preferred because it, unlike a treaty, can dispense with formality, including the requirement to publish and register with the UN Also it offers advantages over a treaty through the ease with which it can be amended, and the confidentiality provided However, according to Aust, an instrument which is not in itself legally binding can nevertheless give rise to legal consequences By the principle of good faith, the parties to an informal instrument may be estopped from denying the terms of the informal agreement recorded between them

[125] *Ibid*, Article 1 (1). The ASEAN-OSRAP had been prepared by the ASEAN Experts Group on the Environment (AEGE), the predecessor of ASOEN, "to provide a cooperative plan for mutual assistance" among Member States "in the event of a major oil spill incident which exceeds the response capability of the national government or oil industry". See ASEAN OSRAP, Chapter 1, p 1, on file with author The ASEAN OSRAP consists of six Chapters and seven Annexes It mainly provides for organizational structure for implementing the Plan, the pollution reporting system (POLREP), the procedure concerning inter-country movement of personnel and equipment in the event that assistance is requested by an ASEAN country affected

the EEZ of the ASEAN countries and the territorial waters of Singapore.[126] According to the Memorandum, a focal point for the ASEAN-OSRAP is to be set up, having its seat in Jakarta, Indonesia [127] The Parties also agreed to promote mutual cooperation on oil pollution preparedness and response[128] and to exchange information on oil pollution incidents "when necessary and appropriate".[129]

We may conclude that at this stage ASEAN cooperation in environmental areas is still at a rudimentary level Despite the fact that the concept of sustainable development has long been recognised in ASEAN's various documents since the early 80's and there have been quite a number of environmental programmes and activities carried out by the organization for the last twenty years, their contribution towards better environmental standards or more concrete environmental cooperation is hard to discern, perhaps because there is no readiness to undertake any binding commitments which may have economic implications. This explains why the 1985 ASEAN Agreement on the Conservation of Nature and Natural resources, which is the only "hard law" document in the environmental field in this region, has not entered into force since its ratification by three of the ASEAN Member States in 1986 In addition, it is worth noting that even though there is a certain degree of cooperation in the areas of fisheries management and prevention of oil pollution damages from tankers, this is in response to a real threat to the economic as well as environmental interests of the ASEAN countries and, in the case of fisheries management, improvement in this is also in the economic interests of some ASEAN countries, especially Indonesia and the Philippines, which benefit from the concept of the EEZ Even in these latter cases, cooperation is still very largely limited to exchange of the information necessary to enable the coastal countries to manage their fishery resources effectively.

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by oil spill casualty, and responsibility for expenses incurred by the rendering of assistance
126 *Ibid*, Chapter 2, Article 2 1
127 Article 1 (2) and (3)
128 Article 2
129 Article 3

On other environmental issues which pose no clear, or too remote a threat to the region, ASEAN has shown less eagerness to cooperate. Very often, ASEAN's perception of global environmental problems such as the loss of biodiversity, ozone depletion, and climate change has been inseparable from the more political issues related to North-South relations. These include a call for the right to development by developing countries; availability of "adequate, new and additional" financial resources for the implementation of conservation measures and the other relevant provisions of Agenda 21, access to, and transfer of environmentally sound technology on "preferential and concessional terms" to developing countries; and avoidance of unilateral trade measures "in the name of environmental protection", which constitute arbitrary or discriminatory restrictions on international trade [130]

[130] See for example, *the Kuala Lumpur Declaration on Environment and Development*, adopted at the Second Ministerial Conference of Developing Countries on Environment and Development, 26-29 April, 1992, reprinted in 22 **EPL** (1992) p 266

CHAPTER 8

THE EUROPEAN COMMUNITY

1. Introduction

The European Community (EC) or the European Union (EU) as it is now called since conclusion of the Maastricht Treaty in 1992, represents the most comprehensive regime in environmental cooperation at present. Although it cannot be said that it is a perfect model and some of its standards have been criticized as politically compromised, it represents the first and most developed regional approach to environmental problems Despite a membership confined to developed States (whose size and economies vary greatly), the EC is an appropriate model for at least two reasons. First, it promulgates environmental measures at a regional level, and secondly, it has in its own right, with its own international personality, become an important actor in international law making [1] This Chapter surveys its approach to environmental policy-making, institutional arrangements, and the environmental measures adopted for purposes of drawing a comparison between the EC and ASEAN in order to see how far, if at all, it is possible for the former to be regarded as a model for the latter. As far as discussion relates to substantive law, reference will be made to EC laws in the areas of air pollution control and the conservation of biodiversity, already focused on in previous chapters

It should be stressed at the outset that the original EC treaties made no mention of and conferred no specific powers to develop, environmental policy or law.[2] Even when the

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[1] P. Sands, *European Community Environmental Law : The Evolution of a Regional Regime of International Environmental Protection*, 11 **Yale LJ** (1991) p.2511, at p 2518. He suggests that other regional integration organizations, including the South Pacific Regional Environment programme (SPREP) and the Caribbean Community (CARICOM) are considering the community approach to regional environmental protection

[2] For the development of the European Communities, see D Lasok and J. Bridge, **Law and Institutions of the European Communities**, 5th edition, Butterworths, London, 1991 For development of their environmental policies and the legal problems to which these give rise, see S P Johnson and G. Corcelle, **The Environmental Policy of the European Communities**, Graham & Trotman, London/Dordrecht/Boston, 1989, L. Kramer, **Focus on European Environmental Law**, Sweet and Maxwell, London, 1992, and L. Kramer, **EC Treaty and**

EC's original three legal Communities established by three separate treaties[3] were merged in 1965, no environmental provisions were added. The Merger Treaty in 1965 merely brought the separate institutions of the ECSC, EURATOM and the EEC together.[4] Such few environmental measures as were adopted in the 1960's and 1970's had to be based on general principles underlying the Common Market.

At present, the EC has fifteen Member States, namely the original Six, France, Germany, Luxembourg, Belgium, Netherlands, Italy (1951); the United Kingdom, Denmark, Ireland (1973); Greece (1981), Spain, and Portugal (1985); and Austria, Finland and Sweden (1994). The institutional structure of the EC now consists of the Commission, the Council of Ministers, the European Parliament (EP) and the European Court of Justice (ECJ). The Commission of the EC is composed of twenty Commissioners from Member States chosen for their general competence and appointed for a renewable period of four years [5] They are required to be independent of their governments and the Council and they cannot be removed by the latter. The President and six Vice-Presidents of the Commission are similarly appointed and hold office for a renewable period of two years. The Commission acts by a majority vote and the Commission collectively, not the Commissioners individually, bears responsibility for its acts. Each Commissioner is assisted by a "cabinet" (a private office and departmental staff). In addition to a Legal Service and other bodies, there are 23 Directorates-General (DG). Each is presided over by a Director-General responsible to the Commissioner holding that portfolio,[6] DG XI, is responsible for the environment.

Environmental Law, revised edition, Sweet & Maxwell, London, 1995

[3] *Viz*, (1) The European Coal and Steel Community (ECSC), see Treaty Establishing the European Coal and Steel Community, 18 April, 1951, 261 UNTS 140. (2) The European Atomic Energy Community (EURATOM), see Treaty Establishing the European Atomic Energy Community, 25 March, 1957. In force 1 January, 1958, 298 UNTS 167. (3) The European Economic Community, see Treaty Establishing the European Economic Community (the Rome Treaty), 25 March, 1957 In force 1 January, 1958, 298 UNTS 267.

[4] Treaty Establishing a Single Council and a Single Commission of the European Communities, 8 April 1965, 4 ILM (1965) 776

[5] *Ibid*, Article 10 (1)

[6] According to Lasok and Bridge, the Commission has a staff of some 10,400, smaller than

According to Article 155 of the EEC Treaty, the Commission has the powers and functions to ensure that the provisions of the Treaty and the measures taken by the EC institutions are applied, to formulate recommendations or deliver opinions on matters relating to the Treaty; to participate in the shaping of measures taken by the Council and by the European Parliament; and to exercise the powers conferred upon it by the Council for the implementation of rules laid down by the latter In short, the Commission represents the bureaucracy, the civil service, of the EC. It has been described by Lasok and Bridge as "an initiator and co-ordinator of Community policy", "the executive agency of the Communities" and "the guardian of the Treaties".[7]

However, it is the Council which is the highest decision-making body of the EC. It is composed of representatives of the governments of each Member State. Usually, each Member State is represented at its meeting by a Minister, who changes according to the topics under discussion - environment, fisheries, agriculture, wildlife - with the Foreign Minister being his country's "main representative" on the Council. The Council has the powers and functions to "ensure co-ordination of the general economic policies of the Member States"; to take decisions; and to confer on the Commission powers for the

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many government departments in its Member States, divided between various Directorates-General and auxiliary services of the Commission, .

[7] Lasok and Bridge, *supra*, note 2, p 224 In its executive capacity, the Commission exercises three main functions. Firstly, it issues decisions and regulations implementing the Treaty provisions. One of the enlarged areas of responsibilities conferred upon it by the Council is in connection with the common policies, especially the Common Agricultural Policy which has major environmental effects and implications and the completion of the internal market Secondly, the Commission is granted specific powers in some cases such as those under the EEC Treaty to restrain restrictive practices and market dominance And thirdly, the Commission is responsible for administering appropriations for the Commission's public expenditure and the four major Community funds These are the European Agricultural Guidance and Guarantee Fund, the Structural Funds, the European Social Fund and the European Development Fund These can, in appropriate circumstances, be used for environmental protection purposes More recently, however, funds with a more specific environmental focus have been established, e g. the Cohesion Fund and LIFE (L' instrument Financier pour l'Environnement). The Lome Convention, under which the EU assists developing countries (namely former colonies and dependencies of certain Member States), is also now being used to a small extent for such purposes

implementation of the rules which the Council lays down

Members of the European Parliament (EP) are elected[8] and sit in their European capacity, not as national MPs. Within the EP, there are 18 specialist committees, one of which is concerned with the environment, health and consumers The development of the EP, following recent amending treaties, has been such that it is moving from a merely consultative role towards possession of greater powers. It will be able in future to exercise greater influence through the conciliation procedure between the EP, the Commission and the Council introduced in 1975 and through the co-operation and co-decision procedures introduced by the Single European Act and the Maastricht Treaty respectively. The EP can pass a motion of censure (as yet unexercised) requiring the Commission to resign and has powers to ask questions.[9] Another significant power is its ability to reject the EC budget and ask for a new draft to be submitted to it.[10] Because it has no law-making powers, the EP has been able to be more forward-looking in environmental issues and is often critical of the EC's slow progress and compromises in this field.

The European Court of Justice (ECJ) was established in 1958. Its function under Article 164 is to ensure that the law is observed in the interpretation and application of the EC Treaties. In addition to the ECJ, a Court of First Instance was established in 1989 under Article 168A of the EEC Treaty [11] At present, the ECJ has 16 elected judges In practice, each Member State has a judge of its nationality on the Court. Several cases concerning environmental issues have been decided by the ECJ.[12] As will be seen below, the Court has consistently supported the view that the Community should have a

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[8] The 626 representatives of the EP were elected by the citizens of each EC Member State for the first time in 1989

[9] EEC Treaty, Article 140

[10] The Financial Provisions Treaty of 1975, OJ 1977, L 359, in force 1 June 1977.

[11] This empowers the Council to establish a court to hear and determine certain classes of actions or cases at first instance To date, it has not been used for environmental issues

[12] For details, see L Kramer, **European Environmental Law Casebook**, Sweet and Maxwell, London, 1993

broad legislative competence in the environmental domain, notwithstanding the fact that such a competence was not originally mandated in the Treaty of Rome.[13] The ECJ's jurisprudence has also exercised positive influence in the development of EC environmental law.[14]

2. EC Legislation

EC legislation normally takes one of two forms, a Regulation or a Directive. According to Article 189 of the EEC Treaty, a regulation has general application. It is binding in its entirety and directly applicable in all Member States.[15] In other words, a Regulation is directly enforceable in national courts just as if it were national legislation It is meant to be an instrument of uniformity within the Community and it must be based on a provision of the Treaty.[16] A Directive is binding upon each Member State as to the result to be achieved, but leaves to the national authorities the choice of form and methods.[17] Generally speaking, administrative measures (e.g. internal circulars) are regarded as not sufficient to incorporate environmental Directives into national law; regulations or even laws are needed for the purpose [18] Unlike Regulations, Directives are not meant to be an instrument of uniformity, and in practice, they are used mainly to effect approximation of national laws. However, like Regulations, Directives have to be substantiated and based on the Treaty.[19] Apart from Regulations and Directives, another less common legislative act is a Decision of the Council or the Commission which is binding in its entirety upon those to whom it is addressed [20] Other non-binding acts of the EC are Council and Commission recommendations and opinions,

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[13] I J Koppen, *The Role of the European Court of Justice*, in J D. Liefferink, P D. Lowe and A P.J Mol (eds), **European Integration and Environmental Policy**, Belhaven Press, London and New York, 1993, pp 126-149

[14] See M L. Schemmel and B de Regt, *The European Court of Justice and the Environmental Protection Policy of the European Community*, 17 **Boston CICLR** (1994) p 53

[15] Article 189 (2), EEC Treaty

[16] Lasok and Bridge, *supra*, note 2, pp 127-8

[17] Article 189 (3) EEC Treaty

[18] Kramer, **EC Treaty and Environmental Law**, *supra*, note 2, p 140

[19] Lasok and Bridge, *op cit*, pp 137-8

[20] EEC Treaty, Article 189 (4), often used to effect EC adherence to a treaty

listed in Article 189 of the EEC Treaty [21]

The doctrine of "direct effectiveness", as developed by the ECJ, has somewhat blurred the distinction between a regulation and a directive by prescribing that where a Member State has failed to implement the provisions of a Directive in its national law, obligations which it imposed that are "complete and legally perfect" may be invoked vertically against the State, or against emanations of the State.[22] In a recent famous case, *Marleasing SA v. La Commercial*, it was reaffirmed that even though the relevant provision of the Directive in question did not have direct effect as between individuals, the national court was under an obligation to interpret its national company's legislation in conformity with, or in the light of the wording and the purpose of the Directive whenever such legislation was open to divergent interpretations [23] A significant limitation of the doctrine of direct effectiveness in relation to a Directive has been that a Directive may not of itself impose obligations on an individual [24] However, in *Francovich and Bonifaci*, it was held that although the Directive was not directly effective because it was neither unconditional nor sufficiently clear, a Member State which fails to fulfil an obligation imposed upon it by Article 189 (3) of the Treaty must be held liable for damages provided that certain conditions are fulfilled [25] *Francovich* has been seen as a breakthrough for an effective means of enforcement of Community Law against Member States because it established a principle that an individual's claim

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[21] See Lasok and Bridge, *op cit*, pp 148-153.

[22] *Marshall v. Southampton and South-West Hampshire Area Health Authority*, Case 152/84 (1986) **ECR** 723, (1986) 1 **CMLR** 688 There are a number of cases on the issue, the first was Case 26/62 *Van Gend en Loos* (1963) **ECR** 1 See also Case 14/83 *Von Colson v. Land Nordrhein-Westfalen*, (1984) **ECR** 1891, (1986) 2 **CMLR** 430, which established the "principle of indirect effect".

In *Foster v. British Gas* (1990) 2 **CMLR** 833, an "emanation of State" was held to include "any body providing a service under the State's control"

[23] (1992) 1 **CMLR** 305, at p 320 *Marleasing* was further reconfirmed in *Wagner Miret* (1993) 1 **ECR** 6911

[24] *Marshall v. Southampton A H A., supra*, note 22.

[25] Case C6/90 *Francovich v Italian State*, Case C9/90 *Bonifaci v Belgian State*, (1992) **IRLR** 84 The cases were decided jointly For a summary of the cases and detailed discussion on the implications of the cases, see J Steiner, *From direct effects to Francovich shifting means of enforcement of Community Law*, 18 **European Law Review** (1993) p 3

to compensation was independent of the principle of direct effects.[26] Individuals may now proceed against their State for its failure to implement Community law even in a case where the Directive is not directly applicable, and this liability will provide incentives for States to comply with their Community obligations [27]

The impacts of the doctrine of direct effectiveness on environmental regulation are not clear and to date no cases concerning direct effects of environmental Directives have been brought before the ECJ. However, it has been suggested that there are at least three groups of environmental Directives which are capable of having direct effects.[28] These are Directives which lay down maximum or limit values of permissible discharges;[29] Directives which prohibit the using of or discharging of certain substances into the environment,[30] and Directives which stipulate obligations for Member States to perform certain acts.[31] It is arguable that, at least with regard to environmental Directives which are designed to protect the life and health of individuals, such as Directives for control of air and drinking water quality, individuals should be able to

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[26] J Steiner, *ibid*, p 9

[27] *Ibid*

[28] L Krämer, *The Implementation of Community Environmental Directives within Member States · Some Implications of the Direct Effect Doctrine*, 3 JEL (1991) p 39, pp 42-48

[29] *Ibid*, he cites as examples, Directive 83/513 on cadmium discharges (OJ L291/83, 1), and Directive 80/778 on the quality of water intended for human consumption (OJ L229/80, 11) As far as setting of limit values for air pollution is concerned, examples are Directive 80/779 on air quality limit values and guide values for sulphur dioxide and suspended particulates (OJ L229/80, 23), Directive 82/884 on limit value for lead in the air (OJ L378/82, 15), Directive 85/203 on air quality standards for nitrogen dioxide (OJ L87/85, 1), and Directive 87/217 on the prevention and reduction of environmental pollution by asbestos (OJ L85/87, 40)

[30] *Ibid*, examples given are Directive 85/467 prohibiting the marketing of certain substances and preparations (OJ L269/85,56), Directive 82/806 prohibiting the use of benzene in toys (OJ L339/82, 85), Directive 80/68 on the protection of ground water which prohibits direct discharge of listed substances into ground water, and Directive 83/129 prohibiting commercial import of fur skins and other products derived from pups of harp seals and hooded seals (OJ L91/83, 30).

[31] *Ibid*; he cites such examples as Directive 85/337 on environmental impact assessment (OJ L 176/85, 18) which specifies that EIA must be carried out for certain public or private projects and that the public concerned must be consulted when an EIA is conducted, and Directive 84/360 on the combating of air pollution from industrial plants (OJ L 188/84, 20) which stipulates that the public must be informed of applications for authorization of certain plants likely to cause air pollution, and of the authorization granted

enforce their rights in courts [32] In any case, it should always be possible for an individual to invoke the relevant provisions as a defence e.g. to reduce payment for the charge of water by reason that he or she is entitled to drinking water which complies with Community standards [33] In the light of this line of argument, the doctrine of direct effectiveness could have substantial impacts on the enforcement of EC environmental Directives.

Although the Community has legislated extensively in the environmental field, its competence is deemed to be limited by the principle of subsidiarity now recognised in the SEA and the Maastricht Treaty.[34] Article 3b of the latter states this in more restrictive terms than the SEA, as follows :

> *In areas which do not fall within its exclusive competence, the Community shall take action, in accordance with the principle of subsidiarity, **only if and so far** as the objectives of the proposed action cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale or effects of the proposed action, be achieved by the Community.* (emphasis added)

Although framed in more restrictive language, the provision still does not provide a clear allocation of competence between the Community and the Member States and it is hard to envisage Community action being challenged on the ground that it violates this principle. Indeed, it has been observed that although the old Art. 130r (4) of SEA has been very much discussed, "there has not been one single environmental measure where the Council has decided or even discussed whether a measure could be better adopted at

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[32] *Ibid* , pp 52-4

[33] *Ibid* , p 54 The Commission has also expressed an opinion that several provisions of Directive 90/313 on freedom of access to information have direct effect even if there is no national legislation implementing them, see *Commission Monitoring of the Application of Community Law*, Tenth Annual Report, OJ C 233/1 (1993), at p 44

[34] Article 130r (4) of SEA which has now been superseded by the Maastricht Treaty, provided that .

The Community shall take action relating to the environment to the extent to which the objectives.. can be attained better at Community level than at the level of the individual Member States ..

Writing in 1990 before the entry into force of the Maastricht Treaty, Kramer's view was that this paragraph could not be regarded as a competence-sharing clause, but more of a political principle or guideline that action must be taken at the most suitable level, see L Kramer, **EEC Treaty and Environmental Protection**, Sweet & Maxwell, London, 1990, pp 70-7

Community level than at the level of Member States", and that "it never occurred that the principle of subsidiarity played any role in the Council's attitudes towards Commission's proposals".[35]

3. The Evolution of EC Environmental Policy

Having primarily economic objectives [36] the original EEC Treaty, the Treaty of Rome, did not make provision for common environmental policy.[37] It has generally been agreed that EC environmental policy as such started in 1972 after the Stockholm Conference [38] Since 1973, five Action Programmes on the Environment have been adopted by the Council of Ministers, each covering a period of four to five years.[39] The

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[35] Kramer, **EC Treaty and Environmental Law**, *supra*, note 2, pp 59-60

[36] i e creating a common market in goods and services, based on the free movement of goods , a Common Agricultural Policy , the free movement of persons, services and capital, and a common transport policy, plus non-discrimination

[37] However, its Preamble contained a commitment to the "constant improvement of the living and working conditions" of the peoples of the Community, Article 2 expressed in a general way the preoccupation with the quality of life, as well as referring to "a harmonious development of economic activities", and "a continuous and balanced expansion", and Article 36 allowed banning or restriction on trade for reasons of public health and the protection of animals and plants, see S P. Johnson and G Corcelle, *supra*, note 2, p 1 Also Articles 100 and 235 require an approximation / harmonization of laws of Member States

[38] The EC had in fact adopted some environmental legislation before 1972 In 1967, Directive 67/548 (**OJ** 1967, L 196/1) on the classification, packaging and labelling of dangerous substances was adopted, and in 1970, Directive 70/157 on noise levels (**OJ** 1970 L 42/6) and Directive 70/220 on pollutant emissions of motor vehicles (**OJ** 1970 L 76/1) were adopted In October, 1972 at the Paris Summit, the Heads of Governments of the EC countries declared that "Economic expansion is not an end in itself Its firm aim should be to enable disparities in living conditions to be reduced .. it should result in an improvement in the quality of life as well as in standards of living particular attention should be given to intangible values and to protecting the environment", see EC Commission, **Sixth General Report**, 1972, p 8 For an account of the evolution of EC environmental policy, see Johnson and Corcelle, *supra*, note 2, E Rehbinder and R Stewart, *Environmental Protection Policy*, in M Cappelletti et al (eds), **Integration Through Law**, Vol 2, W de Gruyter, Berlin, 1985, N Haigh et al , **European Community Environmental Policy in Practice**, vol 1, Graham & Trotman, London, 1986, and D Freestone, *European Community Environmental Policy and Law*, 18 **JLS** (1991) p 135, L Kramer, **EC Treaty And Environmental Law**, *supra*, note 2

[39] First Action Programme (1973-1976) adopted 22 November, 1973, **OJ** 20 12 73 C 112/1, Second Programme (1977-81), adopted 17 May, 1977, **OJ** 13 6 77 C 139/1, Third Programme (1982-86), adopted 17 February, 1973, **OJ** 17 2 83 C 46/1, Fourth Programme (1987-92), adopted 19 October, 1987, **OJ** 7 12 87 C 328/1, and Fifth Programme (1993-1999), adopted 1 February, 1993, **OJ**, 17.5 93, C 138/1 Johnson and Corcelle, considered the first of particular importance, *supra*, note 2, pp 11-14 Its overall objective was "to improve the setting and quality of life" through a number of policies, including, *inter alia*, to prevent, reduce and as far

Fifth Action Programme, entitled *Towards Sustainability*, is now of the most immediate importance. Concluded on the eve of the UNCED in 1992, with Agenda 21 in mind, it defines "sustainable development" as "continued economic and social development without detriment to the environment and the natural resources on the quality of which continued human activity and further development depends".[40] The various Action Programmes can be seen as representing "the basic reference charter" for Community environmental policy.[41]

In contrast to the ASEAN Convention, although no express provision was made for the environment in the original Treaty, the EC, by liberal interpretation of its treaties and recent revisions thereof, has been active in enacting environmental legislation and its environmental policy has in the SEA and Maastricht Treaty been given equal status to the CAP etc. as a core EU policy. To date, there are over 200 instruments regulating the environment and it has often been said that EC activities in this area can be regarded as one of its most successful sectors.[42] Environmental legislation during the initial period was mostly based on Articles 100 and 235 of the EEC Treaty.[43] Since Article 100 only

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as possible to eliminate pollution and nuisances, to ensure sound management of resources or of nature, to improve working conditions and the setting of life, to take account of environmental aspects in urbanization, and to cooperate with States outside the EC. It also enumerated eleven principles including prevention of pollution at source, integration of environment into the earliest possible stage in all the technical planning and decision-making processes; and the polluter pays See also H Booth and A Green, *The European Community Environmental Programme and UK Law*, 1 **European Law Review**, (1976) p 444.

[40] *Ibid* The Programme identifies five target sectors for action, namely, industry, energy, transport, agriculture and tourism At a functional level, seven "themes and targets" are also identified, namely climate change, acidification and air quality, protection of nature and biodiversity, management of water resources, the urban environment, coastal zones, and waste management.

[41] Johnson and Corcelle, *op cit*, p 11, see also pp 12-19 for account of the 2nd, 3rd, and 4th Action Programmes

[42] It is difficult to give an exact figure on the number of Community instruments relating to environmental protection, given the close links to other areas such as agriculture, energy or transport, but Parliament has recently suggested a figure of 445 legislative instruments, including 196 Directives, 40 Regulations, 150 Decisions and 14 Recommendations and Resolutions, see *Commission Monitoring of the Application of Community Law*, 10th Annual Report, *supra*, note 33, p 40

[43] Article 100 (1) provides for enactment of directives for the "approximation of laws" in Member States affecting the "functioning of the common market", as follows:

The Council shall, acting unanimously on a proposal from the Commission, issue

authorized the issuance of directives, most of the environmental measures enacted have been in the form of Directives.[44] The fact that environmental regulation had to be based on these two economically oriented grounds has also led to strange results in some areas such as species conservation where a link between environmental measures and economic objectives was not clear.[45]

The 1987 SEA[46] for the first time expressly recognised the Community's environmental policy. By this Act, a Title VII on the Environment, consisting of Articles 130r, 130s and 130t, was added to Part Three of the EC Treaty.[47] Article 130r (1) enumerated three objectives of the Community's action on the environment : to preserve, protect and improve the quality of the environment; to contribute towards protecting human health; and to ensure a prudent and rational utilization of natural resources. Article 130r (2) of SEA stipulated that "environmental protection requirements shall be a component of the Community's other policies" and laid down the principles on which Community action in this area was to be based : "preventive action should be taken, .. environmental damage should as a priority be rectified at source, and...the polluter should pay". Another important feature of the SEA was Article 100A which introduced qualified

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directives for the approximation of such provisions laid down by law, regulation or administrative action in Member States as directly affect the establishment or functioning of the common market

Article 235 enables the Council to enact measures necessary to attain "one of the objectives of the Community". It reads as follows :

If action by the Community should prove necessary to attain, in the course of the operation of the common market, one of the objectives of the Community and this Treaty has not provided the necessary powers, the Council shall, acting unanimously on a proposal from the Commission and after consulting the European parliament, take the appropriate measures

[44] See Article 189 of the EC Treaty

[45] D Freestone, *European Community Environmental Policy and Law, supra,* note 38, at pp 136-7. For example, Council Directive 79/409/EEC of 2 April 1979, on the conservation of wild birds, based on Article 235, states in its Preamble that the conservation of wild birds "*is necessary to attain,* within the operation of the common market, the Community's objectives regarding the improvement of living conditions, *a harmonious development of economic activities throughout the Community and a continuous and balanced expansion* ." (emphasis added)

[46] 25 ILM (1987) 506

[47] Article 25 of SEA.

majority voting (QMV)[48] by the Council in adopting measures for the establishment and functioning of the internal market.[49] Article 100A provided further that the Commission, in its proposals "concerning health, safety, environmental protection and consumer protection, will take as a base a high level of protection".[50] Member states are also allowed to adopt stricter standards relating to the protection of the environment by notifying the Commission of those provisions.[51] The SEA, by providing a clear legal basis for environmental regulation in Articles 130 and 100A, enables Community's measures relating to environmental protection to be enacted without a link with economic objectives having to be established.

The Treaty on European Union (TEU), *viz* the Maastricht Treaty of 1992[52] placed environmental policy on an equal footing with other EC policies. Article 2, as amended, requires the Community to "promote throughout the Community a harmonious and balanced development of economic activities, *sustainable and non-inflationary growth respecting the environment*" (emphasis added); the avoidance of use of the term "sustainable development" is notable. Article 3 stipulates further that the activities of the Community include "a policy in the sphere of the environment".[53] The

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[48] In QMV, votes are weighted roughly in accordance with each Member State's population. For the formula, see Article 148 (2) of the Merger Treaty. A qualified majority is taken to be 62 votes out of 87.

[49] Article 100A (1) provided that ". The Council shall, acting by a qualified majority on a proposal from the Commission in co-operation with the European Parliament and after consulting the Economic and Social committee, adopt the measures for the approximation of the provisions laid down by law, regulation or administrative action in Member States which have as their object the establishment and functioning of the internal market". This Article 100A was subsequently replaced by Article 100A of the Maastricht Treaty which provides for a more elaborate and complicated "co-decision procedure" between the Council and the European Parliament.

[50] Article 100A (3).

[51] Article 100A (4). Those provisions will be confirmed by the Commission "after having verified that they are not a means of arbitrary discrimination or a disguised restriction on trade between Member States". Some cases had created problems e.g. the *Danish Bottles Case* (see *infra*, note 69), Denmark had introduced requirements that though environmental in purpose were discriminatory in practice.

[52] 31 ILM (1992) 247, 32 ILM (1993) 1693. The Treaty came into force on 1 November 1993.

[53] Article 3 (k).

environmental provisions in Articles 130r, 130s and 130t were also amended [54] Article 130r as amended adds another objective to the Community policy on the environment, namely "promoting measures at international level to deal with regional or worldwide environmental problems", high amongst which will certainly be implementation of the Climate Change and Biodiversity Conventions. The precautionary principle is the first to be enumerated on the list of principles now required to guide Community policy on the environment. Like the SEA, the TEU provides for integration of environmental protection into other sectors of Community's policies. The new Article 130r (2) provides that "(e)nvironmental protection requirements must be integrated into the definition and implementation of other Community policies". However, the Treaty does not give guidance as to how the principle of integration should be put in practice. Although the idea of integration had been developed earlier in various policy documents including the third, fourth, and fifth Action Programmes, there is little evidence that this had in fact been implemented in practice. It has been observed that the prime cause for this lack of integration has been the compartmentalization of issue areas, especially in the Commission.[55] However, there have been some signs that the Commission is now seriously considering implementing the principle of integration more effectively [56]

Another highly significant change is that QMV has now become a general rule. The so-

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[54] These were amended by Article G (38) of TEU By this, Title VII on the Environment as introduced by the SEA was changed to Title XVI

[55] M Kamminga, *Improving Integration of Environmental Requirements into Other EC Policies*, **EEL. Rev.** (1994) p 23, at p 24, observes that "what has been lacking so far. are the tangible procedural and institutional measures to ensure that integration actually does take place at the various levels of EC decision-making "

[56] *Ibid* Kamminga considers the Commission's communication on 2 June, 1993, regarding internal measures to promote the better integration of environmental protection requirements into other Community's other policies to be an important move It provided that . (1) In considering all its actions, the Commission will examine whether there are implications for the environment, (2) Where a significant impact on the environment is expected, a strategic assessment of the impact will be undertaken, (3) Where a legislative proposal with a significant impact on the environment is to be made by the Commission, the explanatory memorandum will describe and justify those consequences, (4) In each of its Directorates-General, a senior official will be made responsible for ensuring that proposals developed there will take account of the environment and the requirement of sustainable development

called "co-operation procedure" under Article 189c, in conjunction with QMV in the Council, has now become the normal procedure for adoption of environmental legislation.[57] In addition, the "co-decision procedure" under Article 189b, which gives the EP an equal say with the Council, applies to matters under Article 100a as amended by the TEU and to "general action programmes setting out priority objectives to be attained".[58] Unanimity is still required for adoption of provisions primarily of a fiscal nature, measures concerning town and country planning, land use (except waste management and measures of a general nature) and management of water resources, and measures significantly affecting a Member State's choice between different energy sources and the general structure of its energy supply.[59] Even in these areas, the Council can still decide which of the matters referred to them are to be adopted by a qualified majority.[60] The new legislative process, especially so far as the co-decision procedure under Article 189b is concerned, has been criticized as being too complicated as it can in some cases run to eleven separate stages stretching over many months.[61] Although in principle QMV would remove the ability of a member State to veto a proposal, thus speeding up Council decisions and making higher environmental standards easier to achieve, the complications introduced by the Maastricht Treaty could

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57 Article 189c provides for a co-operation procedure between the Council and the European Parliament (EP). Under it, the EP is given two opportunities to propose amendments to a proposal which has been approved by the Council by a qualified majority. It may reject a proposal but the Council can still enact it if it acts unanimously.

58 Article 130s (3). Article 189b, normally referred to as the "co-decision procedure", accords even more power to the EP to act jointly with the Council in the adoption of measures under Article 100a as amended by the TEU (measures for the approximation of laws affecting the functioning of the internal market) and "general action programmes setting out priority objectives to be attained" under the new Article 130s (3). This procedure enables the EP by an absolute majority, after attempts at conciliation, to reject a proposal approved by the Council by a qualified majority. For a summary of the co-decision procedure in Article 189b, see D. Freestone and D. Ryland, *EC Environmental Law after Maastricht*, 45 **Northern Ireland Legal Quarterly** (1994) p. 152, at pp. 160-1, f.n. 48. They also pointed out that measures adopted by this procedure under Article 100a (1) may extend to measures relating to the environment and thus further enhance the EP's influence in environmental legislation.

59 Article 130s (2).

60 *Ibid*.

61 D. Wilkinson, *Maastricht and the Environment : The Implications for the EC's Environmental Policy of the Treaty on European Union*, 4 **JEL** (1992) p. 221, at pp. 227-8.

have the opposite effect and slow down the legislative process [62] In addition, the scope of the matters which still require unanimity under Article 130s (2) is unclear and this may lead to protracted arguments between the EC institutions as to which procedure to apply.[63]

Of relevance to the problems of ASEAN is that, in applying Community law, the EC recognises differences in the ability of the Member States to comply with Community standards. Article 130s (5) enables the Council to adopt provisions allowing "temporary derogations" and/or "financial support from the Cohesion Fund..". This power to allow derogations only applies, "without prejudice to the principle of polluter should pay", if an environmental measure "involves costs deemed disappropriate for the public authorities of a Member State". This obviously means that costs deemed disappropriate for the private sector within a Member State would not justify derogations. The Cohesion Fund is a Fund set up by Article 130d of the Maastricht Treaty to support "projects in the field of environment and trans-European network in the area of transport infrastructure". Eligibility for support from the Fund is confined to Member States with a per capita GNP less than 90% of the Community average, which have drawn up programmes for economic convergence with the rest of the Community. The rationale for the establishment of the Cohesion Fund is to help development of transport infrastructure in the poorer Member States as well as to fund environmental programmes or projects in these countries However, the operation of the Fund during its first functioning year, 1993 was criticized for having given priority to road construction over environmental projects.[64] It is worth noting that the largest share of EC's environmental spending is still channelled through the EC's Structural Funds or the European Regional

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[62] *Ibid*

[63] *Ibid*, pp 228-9 For example, whether the term "land use" encompasses nature conservation measures to protect wildlife habitats, or "measures of a general nature" include legislation on environmental impact assessment

[64] D Wilkinson, *Using the European Union's Structural and Cohesion Funds for the Protection of the Environment*, 3 **RECIEL** (1994) p 119, at p 124 See also *The Cohesion Fund*, **EEL. Rev.** (1994) p 265, reporting in detail on the proportional allocation of cohesion finance in 1993

Development Fund (ERDF).[65] However, it has been observed that an increase in environmental spending does not necessarily correspond with environmental benefits because monitoring of how the money is actually spent is poor and some projects classified as environmental have in fact caused environmental harm.[66]

While the EC recognises the difficulty that some countries with lower level of economic development experience in complying with environmental measures, it on the other hand allows developed Member States to adopt stricter standards Article 100a (4) of SEA, which is still retained in the Maastricht Treaty, enables a Member State, if deems it necessary after the adoption of harmonization measures by the Council, "to apply national provisions on grounds of major needs.....relating to the protection of the environment or the working environment". This provision has been generally understood as allowing Member States to continue to apply their national measures to protect the environment even after the Council has adopted a decision by qualified majority [67] The Maastricht Treaty provides further in Article 130t that environmental measures adopted by the Council "shall not prevent any Member State from maintaining or introducing more stringent protective measures....". However, such measures must be compatible with the Treaty and they must be notified to the Commission. Commenting on the wording in Article 130t, Kramer suggested that Member States are only allowed to take more stringent measures than measures which have already been adopted by the Community. In other words, they may not adopt different measures from the Community, but only tougher protective measures which aim in the same direction and come closer than the Community rules to attaining the environmental objectives [68]

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[65] Wilkinson, *ibid*, pp 119-121, the Structural Funds provide about one-third of the entire EC's budget towards the economic development of disadvantaged regions Following reform of the Structural Funds in 1988, there was a substantial increase in expenditure by the Funds on environmental protection

[66] *Ibid*, p 120

[67] Kramer, **EC Treaty and Environmental Law**, *supra*, note 2, p 101 Also L Kramer, *Implementation of Community Environmental Directives* , *supra*, note 28, p 45.

[68] Kramer, **EC Treaty and Environmental Law**, *ibid*, pp 101-2

Apart from the *Danish Bottles Case*,[69] which arose before the SEA and the Maastricht Treaty, there has been no case law which gives clear guidance on this point. However, the *Danish Bottles Case* has often been lauded as an example of how environmental protection measures can be justified even though they may have effects on free trade, in this case a restriction on the free movement of goods within the common market.[70]

Within these frameworks and settings, unlike ASEAN, the EC has generated an extensive body of rules governing environmental protection in all areas, including the protection of water quality; air quality; conservation of flora and fauna, control of production, disposal and movement of waste; and regulation of chemicals and dangerous substances. These substantive rules are supplemented by procedural rules such as the Directive on the Freedom of Access to Information,[71] and the Directive on the assessment of the effects of certain public and private projects on the environment, or the Directive on Environmental Impact Assessment.[72] As far as institutional development supporting EC environmental policy is concerned, it is worth noting the recent establishment of the European Environment Agency (EEA),[73] in Denmark.[74] The objective of the EEA is "to provide the Community and the Member States with objective, reliable and comparable information on the environment and the necessary technical and scientific support to enable them to take the requisite measures to protect the environment, to assess the results of such measures and to ensure that the public is properly informed about the state of the environment".[75] Although the final form of the

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69 *EC Commission v Denmark*, Case 302/86, 1 **CMLR** (1989) 619

70 See for example, P Sands, *Danish Bottles and Mexican Tuna*, 1 **RECIEL** (1993) p 28, and Wilkinson, *Maastricht and the Environment ...*, *supra*, note 61, pp 232-3.

71 Directive 90/313, **OJ** L 158, 23 6 90

72 Directive 85/337, **OJ** L 175, 5 7.85

73 Regulation 1210/90 of 7 May 1990 on the establishment of the European Environment Agency and European environmental information network, **OJ** (1990), L 120/1. For a brief description of the organizational structure and functions of the EEA, see D Ryland, *European Environment Agency*, **EEL Rev.** (1994) p 138 The EEA comprises a Management Board headed by an Executive Director, and a Scientific Committee

74 Council Decision, **OJ** (1993), C 323/1

75 Article 1 (2) of Council Regulation 1210/90

EEA was watered-down from that originally envisaged by the Commission, viz as an agency with monitoring and enforcement powers, the Agency provides a good model for ASEAN as a starting point for regional cooperation. This is especially so since, as has been stated earlier, information available concerning the state of the environment in the ASEAN region, such as that concerning air pollution and the problem of acid rain, is still minimal. The establishment of an Agency of this kind is also a realistic option for ASEAN as it involves scientific cooperation and exchange of information with no binding commitments, a route usually preferred by this organization.

4. Enforcement of EC Environmental Law

Despite such impressive advances in environmental legislation, problems of enforcement and monitoring of compliance remain issues of concern in the EC. There are a number of EC treaty articles dealing with these issues. Under Article 170 of the EEC Treaty, a Member State which considers that another Member State has failed to fulfil an obligation under the Treaty may bring the matter before the ECJ. Certain procedures have to be complied with before an action is brought The complaining Member State must first bring the matter before the Commission, which will deliver a "reasoned opinion" (see below) after each of the States has been given an opportunity to submit its case and observations both orally and in writing Such a reasoned opinion by the Commission must be delivered within three months but the absence of such an opinion does not prevent the matter being brought before the ECJ.

The second, and most important channel through which compliance with EC law is monitored is the Commission itself. According to Article 155 of the EEC Treaty, the Commission has the function of ensuring that the provisions of the Treaty and the measures taken by the EC institutions are applied. In this respect, the Commission can be regarded as the "watchdog" of the Community. The Commission investigates an alleged infringement of the provisions of the EC either on its own initiative or on the basis of complaints received from governments, commercial undertakings, private

individuals, and NGOs, which have now become important in exercising influence as well as supplying information concerning breaches of laws to the Commission. If, after examining complaints, the Commission finds that the allegation is grounded, it can institute proceedings under Article 169, which provides that :

If the Commission considers that a Member State has failed to fulfil an obligation under this Treaty, it shall deliver a reasoned opinion on the matter, after giving the State concerned the opportunity to submit its observations.

If the State concerned does not comply with the opinion within the period laid down by the Commission, the latter may bring the matter before the Court of Justice.[76]

According to this procedure, the Commission will give the State concerned an opportunity to submit its comments or explanations within a specified period, usually two months or less depending on the seriousness of the infringement If the State concerned fails to give a satisfactory explanation, the Commission will then deliver a reasoned opinion requiring compliance within a specified time. If that State still fails to comply with the EC provisions within the time limit, then the Commission can bring the matter before the ECJ The Commission's role as "watchdog" has generally been viewed as an important one with the number of proceedings increasing substantially over the years. As far as complaints from private individuals are concerned, this has been encouraged by the Commission and has also been increasing over the years [77]

Another less important route for enforcement of EC laws, which has rarely been taken, is use of the ECJ's powers to review and challenge the acts of the Council and the Commission.[78] Actions may be brought by a Member State, the Council or the

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[76] For the use of Art 169 procedures, see R Macrory, *The Enforcement of Community Environmental Laws Some Critical Issues*, 29 **CML Rev.** (1992) p 347 According to him, Member States' failure to implement Community legislation can be broken down into three main areas · (1) failure to communicate to the Commission national laws and other national measures implementing the Community instruments in question; (2) incomplete or incorrect transposition of Community obligations into national law, and (3) failure to apply the Community obligations in practice, whatever the state of national law

[77] According to Krämer, complaints now number about 500 per year Each is entered into a special register maintained by the Commission The Commission has published a form designed to facilitate lodging of complaints, Kramer, **EC Treaty and Environmental Law**, *supra*, note 2, p 142

[78] Article 173 of the EEC Treaty, as amended by Article G (53) of the TEU, empowers the ECJ

Commission.[79] A natural or legal person may also institute this proceedings against a decision addressed to that person, or against a decision addressed to another person but which is of direct and individual concern to that person [80] Furthermore, the ECJ has powers in proceedings similarly instituted to challenge the Council, the EP or the Commission for failing to act on an infringement of the Treaty.[81] Challenges can also be raised under Article 177 of the EEC Treaty, as amended by Article G (56) of the TEU, which enables the ECJ to give "preliminary rulings" on questions referred from national courts concerning interpretation of treaty provisions, validity and interpretation of acts of the institutions of the Commission and of the European Central Bank (ECB); or the interpretation of the statutes of bodies established by an act of the Council, where those statutes so provide. The number of cases brought under this Article has also increased.

A recent significant development in the enforcement of EC law was introduced by the Maastricht Treaty's amendment of Article 171 of the EEC Treaty. This gives greater powers to the ECJ to enforce its own judgments. According to the changes, if the Commission considers that a Member State has not complied with a judgment of the Court, it may refer the matter back to the Court with a recommendation that the Member State should pay a specified lump sum or "penalty payment" [82] Although the Treaty does not provide further for the Member State's failure to pay the fine, such non-compliance would probably result in the withholding of assistance from the EC's various funds, including the Structural Funds, the Agricultural Fund and the Cohesion Fund [83]

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to review the legality of acts of various EC institutions on certain grounds

[79] *Ibid.*

[80] Article 173 (2)

[81] Article 175 of the EEC Treaty, as amended by Article G (54) of TEU The Court also has jurisdiction, under the same conditions, in actions or proceedings brought by the European Central Bank (ECB) in the areas falling within the latter's field of competence and in actions or proceedings brought against the latter.

[82] Article 171 (2)

[83] Wilkinson, *Maastricht and the Environment... , supra,* note 61, p 233 According to Kramer, the Commission has suspended payments on several occasions The main area covered were the construction of motorways or other infrastructure projects without a proper EIA However, there does not seem to have been any single decision by the Commission definitely to

Therefore it is interesting to see how far this new provision could strengthen the EC's enforcement powers in the future

It is worth noting that although the Treaty provisions have provided a number of ways to enforce EC laws and it can be fairly said that the EC is more advanced than the traditional system of enforcement in public international law in this regard, it is generally admitted that there remains need for improvement in the EC enforcement system, especially as EC legislation in all sectors including the environmental field, continues to grow and it is evident that there is an increasing number of violations of EC laws by Member States [84] Various enforcement problems have been identified, including the length of time taken under Art.169 proceedings (an average of six years); loose and general drafting of EC environmental legislation, such as the use of the term "Best Available Technology Not Entailing Excessive Costs (BATNEEC)", which has given rise to different interpretations by Member States; and poor information supplied in national reports on implementing measures undertaken by Member States [85] Above all, it is clear that the Commission is under-resourced so far as carrying out effective monitoring of implementation in Member States The House of Lords Select Committee on the EC has recommended a number of measures to improve monitoring and enforcement These include, *inter alia*, establishment of an environmental audit inspectorate within the new European Environmental Agency; increasing the number of staff in DG XI; identification of enforcement priorities by the Commission, increased openness in Article 169 proceedings, and introduction of EC legislation to improve

refuse payment because of a Member State's disregard of environmental legislation Political pressure also casts doubts on whether refusal to give financial assistance is an effective tool, Kramer, **EC Treaty and Environmental Protection**, *supra*, note 2, p 137

[84] According to the Twelfth Report of the Commission on the monitoring of the EC law, Member States improved their application of Community law in 1994, notifying an average of 91 89% of their national implementing measures, as required by the Directive, by 31 December 1994 However, implementation rates fell in some areas, such as environmental policy and consumer protection, **The Week in Europe**, 6 July 1995

[85] Kramer, **EC Treaty and Environmental Law**, *supra*, note 2, p 141 It is worth noting that Directive 91/692, which aimed at standardising and rationalising national reports on the implementation of certain Directives relating to the environment, should improve supply of information by Member States

access to national courts by individuals and NGOs challenging acts undertaken in breach of Community obligations [86]

Given the limitation of enforcement by EC institutions and public authorities of Member States, enhancing the role of individual citizens has generated substantial discussion. As outlined in Chapter 1, the principle of people's or public participation has been widely recognised in many modern international instruments including the Rio Declaration [87] The EC Fifth Programme of Action on the Environment also recognises this principle. It stated that "(i)ndividuals and public interest groups should have practical access to the courts in order to ensure that their legitimate interests are protected and that prescribed environmental measures are effectively enforced and illegal practices stopped".[88] Despite this seeming commitment to facilitate more participation by individuals and NGOs in enforcing environmental measures, it has generally been difficult for these two groups to bring an action, in national, let alone EC, courts to challenge administrative decisions or acts affecting the environment. For instance, in the case of the United Kingdom, there are two major obstacles to this, namely the rules on *locus standi* and the rules on recovery of costs which do not favour public interest litigation.[89] In order to have *locus standi* to bring an action for judicial review of an administrative act or decision, the concerned citizen must show that he or she "has sufficient interest in the matter to which the application relates"[90]. It is difficult to establish clear rules to determine what constitutes "sufficient interest" but case law suggests that the determination of the question is overall a matter of judicial policy depending on a number of considerations, such as the nature of the remedy sought, and whether the

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[86] House of Lords Select Committee on the European Communities, *Report on the Implementation and Enforcement of Environmental Legislation*, Session 1991-92, 9th Report, HL Paper 53-1, paras 111-112, and 127

[87] Principle 10 of the Rio Declaration

[88] Council Resolution 93/C, OJ C 138, 17 5 1993, pp 81-2

[89] P Sands, *Applying EC Environmental Law · Obstacles to Citizen Enforcement*, paper presented at the 1994 Dicey Lectures, the Ross McWhirter Foundation, Oxford, 15-16 March, 1994, on file with the writer For a brief survey of English rules on *locus standi*, see also A Geddes, *Locus Standi And EEC Environmental Measures*, 4 JEL (1992) p.29

[90] The Supreme Court Act 1981, S 31 (3), Rules of the Supreme Court, Order 53r (7)

relevant statute gives any express or implied right to persons in the position of the applicant to complain of the alleged unlawful act or omission [91] A recent case, the *Rose Theatre Case*,[92] is often referred to as demonstrating the restrictive approach which the Court has adopted towards the issue of *locus standi* and public interest litigation. However, in the more recent case of *R. v. Secretary of State for the Environment and others, ex parte Greenpeace Ltd. and Lancashire County Council*,[93] a more liberal approach was adopted and the Court held that Greenpeace as an eminently respectable and responsible organization with a genuine concern for the environment had *locus standi* to apply for judicial review of authorizations by governmental authorities to British Nuclear Fuels plc (BNFL) in respect of radioactive discharges from the THORP nuclear reprocessing facility at Sellafield, Cumbria. This case has been viewed positively as offering a promising prospect for actions brought by well-established environmental groups in the future.[94]

At the Community level, the question of *locus standi* has not been directly addressed by the ECJ but the position concerning individuals' right of action has consistently been stated restrictively to encompass only persons to whom a decision is addressed. For other persons not directly addressed to have individual concern, they must show that they are affected by "reasons of certain attributes which are peculiar to them or by reason of circumstances in which they are differentiated from all other persons [95] At

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91 See Geddes, *supra*, note 89, p 33, discussing the leading case of *R v IRC ex parte National Federation of Self Employed Small Businesses Ltd.*, (1982) AC 617.

92 *R v. Secretary of State for the Environment, ex parte Rose Theatre Trust Company*, (1990) 2 WLR 186 This was a case brought by the Rose Theatre Trust Company which sought judicial review of the decision by the Secretary of State for the Environment not to list the remains of the recently discovered Rose Theatre as a listed building under Section 1 of the Ancient Monuments and Archaeological Areas Act of 1979

93 **The Independent Law Report**, 8 March, 1994

94 See P. Bowden and J Lawrence, *THORP and After -Challenging State Decisions*, EEL. Rev. (1994) 251 The question of *locus standi* was treated by the Court as one of discretion which must be considered on a case-by-case basis In this case, *locus standi* was granted on the basis of Greenpeace's considerable record of environmental concern, and the fact that if standing was refused, there were no other obvious parties with *locus standi* that had Greenpeace's resources to pursue the challenge

95 Case 169/84 *Cofaz SA v Commission* (1986) ECR 391, para 22

present, the Commission does not appear to have immediate plans for legislation relating to the development of rules of *locus standi* at national level.[96]

5. The EC's External Relations Powers

A significant aspect of the EC's environmental role at the international and regional level concerns the question of the EC's external powers, i.e. the powers of the EC as such to cooperate with States and international institutions, especially with regard to the conclusion of environmental treaties.[97] They have developed largely through the case law of the ECJ, and there is a considerable literature on the complexities involved but space does not permit further discussion of this aspect.[98] As suggested by Haigh, EC involvement on the international stage must in the final analysis be justified by the extra contribution that it can make towards solving international problems when compared to what the Member States acting independently could themselves have done. The EC's contribution during the negotiation of the Montreal protocol seems to justify this.[99]

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[96] Freestone and Ryland, *supra*, note 58, p 171

[97] There have been extensive discussions on the extent, evolution and problems of EC external powers These include, *inter alia*, P M Leopold, *External Relations Power of the EEC in Theory and Practice*, 26 **ICLQ** (1977) p 54, P Pescatore, *External Relations in the Case-Law of the Court of Justice of the European Communities*, 16 **CML. Rev.** (1979) p 615; K.R Simmonds, *The Evolution of the External Relations Law of the European Community*, 28 **ICLQ** (1979) p 644, and C Mastellone, *The External relations of the EEC in the Field of Environmental Protection*, 30 **ICLQ** (1981) p 104 On the Conventions in which the EC and its Member States can become parties, known as "mixed agreements", see A Nollkaemper, *The European Community and International Environmental Co-operation - Legal Aspects of External Community Power Protection*, 30 **ICLQ** (1981) p 104. On the Conventions in which the EC and its Member States can become parties, known as "mixed agreements", see A. Nollkaemper, *The European Community and International Environmental Co-operation - Legal Aspects of External Community Powers*, **Legal Issues of European Integration** (1987) p 55, T Lang, *The Ozone Layer Convention · A New Solution to the Question of Community Participation in "Mixed" International Agreements*, 23 **CML. Rev.** (1986) p 157, D O' Keeffe, and H G Schermers (eds) **Mixed Agreements**, Kluwer Law & Taxation Publishers, Deventer/the Netherlands, Antwerp-Boston-London-Frankfurt, 1983, pp 3-21 On the negative effect of EC's participation in the Paris Commission, see S Saetvik, **Environmental Cooperation between the North Sea States : Success or Failure ?** Belhaven Press, London and New York, pp 98-106

[98] See Case 22/70 *Commission v Council* (Re European Road Traffic Agreement), (1971) **ECR** 263

[99] N Haigh, *The EC and International Environmental Policy*, in A Hurrell and B Kingsbury, **The International Politics of the Environment**, Clarendon Press, Oxford, 1992, pp 228-249, at pp 244-7.

6. Examples of EC Environmental Legislation

Space does not permit an examination of EC environmental legislation in all sectors Thus, only a brief account of EC environmental laws in the areas of air pollution control and the conservation of biodiversity will be given. In addition, some procedural laws, namely the Directives on Environmental Impact Assessment and the Right to Information, which are crucial to sustainable development, in particular the principle of public participation, will be examined

6.1 EC Laws Concerning Air Pollution Control

The EC has introduced a substantial body of laws for the control of air pollution [100] Serious efforts to fight atmospheric pollution started only from 1980 onwards although there was some earlier legislation in this field.[101] These were prompted by the pressure following the Community's accession to the 1979 LRTAP Convention, as well as by the increasing awareness of the acid rain problems. It is not possible to describe all the EC legislation combatting air pollution, only particularly important measures will be mentioned to give a rough picture of EC activities in this area Various techniques have been used to regulate air pollution, such as the prescription of air quality standards by setting limit values of atmospheric concentration of certain pollutants; regulation of fuel contents, control over emissions from industrial, waste incineration, and combustion plants through setting of limit values of discharges, and control over production and import of ozone-depleting substances More recently, the Community has also introduced legislation requiring Member States to adopt programmes for the reduction of CO_2 and other greenhouse gases in order to meet their and its commitments under the Climate Change Convention and oral commitments made by EC Member States at

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[100] Johnson and Corcelle, *supra*, note 2, p 109.

[101] Examples are Directive 70/220, of 20 March 1970, OJ L 76, 6 4 1970 (subsequently amended by Directive 91/441, OJ L 242, 30 8 1991, and Directive 93/59, OJ L 186/21, 28 7 93) on the approximation of laws of the Member States relating to measures to be taken against air pollution by emissions from motor vehicles, and the 1975 Directive on the sulphur content of gas oil

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Since 1970, a number of directives has dealt with emissions from motor vehicles Directive 70/220, as amended,[102] lays down limit values for CO and unburnt hydrocarbon emissions from motor vehicles. This is supplemented by Directive 77/102[103] which sets limit values for permissible emissions of NO_x. These three limit values were subsequently reduced by various Directives.[104] In 1988, limit values for particulate pollutant emissions from diesel engines were introduced [105] More stringent standards for emissions of gaseous pollutants from cars below 1,400 cm^3 were next stipulated[106] and later extended to all cars independently of their engine capacity and more stringent particulate pollutant standards for cars equipped with diesel engines were introduced.[107] Finally, more stringent exhaust emission for all motor vehicles were laid down and Member States were allowed to permit temporary tax incentives in respect of new motor vehicles which complied with these standards before 1 October 1994,[108] the date from which the entry into service of vehicles failing to meet these requirements is to be prohibited. This survey indicates consistent effort by the Community to adopt increasingly stringent standards in this area.

Related to regulation of exhaust emissions from motor vehicles is the regulation of fuel content. As early as 1975, Directive 75/716 had aimed at a reduction in SO_2 emissions caused by gas oil fuels [109] It was subsequently amended by a 1987 Directive which

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102 *Ibid*

103 OJ L 32, 3 2 1977, p 32.

104 Directice 74/290, OJ L 159, 15 6 1974, p 61; Directive 78/665, OJ L 223, 14 8 1978, p 48, Directive 83/351, OJ L 197, 20 7 1983, p 1, and Directive 88/76, OJ L 36, 9 2 1988, p 1, which imposed stringent emission standards from cars over 2,000 cm^3, which has made the fitting of catalytic converters thereon necessary

105 Directive 88/436, OJ L 214, 6 8 1988, p 1

106 Directive 89/458, OJ L 226/1, 3 8 1989, p 1

107 Directive 91/441, OJ L 242, 30 8 1991, p 1

108 Directive 93/59, amending Directive 70/220, *supra*, note 101

109 OJ L 307, 27.11 75 The Directive does not deal with gas oils used in power stations or by shipping It made a distinction between two types of gas oil, i e type A or low sulphur gas oil whose sulphur content must not exceed 0 5% as of 1 October 1976, and then 0 3% as of 1

provided for the reduction of the limit value for the sulphur content of all gas oils to 0.3% in all Member States.[110] Regulation of lead content in petrol started in 1978; the maximum permitted lead content is now fixed at between 0.40 and 0.15 grammes per litre of petrol, with a provision that Member States must reduce this to 0.15 grammes per litre as soon as they deem appropriate.[111] Of special importance was the requirement that Member States must ensure the compulsory introduction and balanced distribution within their territories of lead-free petrol from 1 October 1989 onwards [112] The benzene content of both leaded and unleaded petrol is also fixed at a maximum of 5% by volume.

The Community also began to set air quality standards from the beginning of the 1980's onwards. After the signing of the 1979 LRTAP Convention, limit values and guide values were set for SO_2 and suspended particulate matter which must not be exceeded in the territory of the Member States [113] A limit value for lead in the air was set at 2 micrograms of lead per cubic metre.[114] This was followed by a limit value for NO_2 in 1985, set to WHO standard at 200 micrograms per cubic metre [115]

Air pollution from industrial plants is regulated by specific legislation controlling emissions from industrial, combustion, and waste incineration plants A framework Directive was adopted in 1984 to establish a system of prior authorization for the

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October 1980, and type B gas oil which was allowed for use in zones where atmospheric SO_2 pollution was sufficiently low

[110] OJ L 91, 3 4 87. This had a result of abolishing the distinction between type A and type B gas oils Member States wishing to adopt a lower limit value are allowed to do so provided that the value set is not lower than 0 2%

[111] Directive 85/210, OJ L 96, 3 4 1985

[112] The Directive was subsequently amended in 1987 to allow Member States to prohibit the marketing in their territory of leaded petrol with octane number below the minimum set limit if such a measure is justified for the protection of health, the environment, and the promotion of balanced distribution of unleaded petrol within their territory; OJ L 225/33, 13 8 87.

[113] Directive 80/779, OJ 1980, L 229/30, 30 8 80

[114] Directive 82/884, OJ 1982, L 378/15, 31 12 82 Member States were given a period of five years to comply with the standard.

[115] Directive 85/203, OJ 1985, L 87/1 Guide values were also provided for by this Directive

operation of any new industrial plant,[116] other than those serving national defence purposes. An authorization may be issued only when certain conditions concerning pollution control are satisfied [117] Article 8 enables the Council to fix emission limit values BATNEEC, and taking into account the nature, quantities and harmfulness of the emissions concerned. This has so far resulted in adoption of some Directives controlling air pollution from industrial plants, namely Directive 89/369 on the prevention of air pollution from new municipal waste incineration plants, Directive 89/429 on the reduction of air pollution from existing municipal waste incineration plants, and the well-known Directive of 1988 on Large Combustion Plants considered below.

The 1988 Directive on the limitation of emissions of certain pollutants into the air from large combustion plants[118] has been regarded as the EC's most important legislation dealing with transboundary air pollution (the acid rain issue), as well as providing a model for dealing with global warming issue.[119] It applies only to combustion plants designed for production of energy, the rated thermal input of which is equal to or greater than 50 MW irrespective of the type of fuel used, Articles 1 and 2 (7) exempt those which make direct use of the products of combustion in manufacturing processes and those powered by diesel, petrol and gas engines or gas turbines, irrespective of the fuel used Member States must, no later than 30 June, 1990 take appropriate measures to ensure that all licences for the construction or operation of new plants contain conditions

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116 Directive 84/360, OJ 1984, L 188/20, 16.7 84 By Article 2, Member States must ensure that operation of plants belonging to 6 categories listed in Annex I requires prior authorization by the competent authorities, *viz* the energy industry, production and processing of metals; manufacture of non-metallic mineral products, chemical industry, waste disposal, and other industries (at present consisting of plants for the manufacture of paper pulp by chemical methods with a production capacity of 25,000 tonnes or more per year)

117 According to Article 4 of the Directive, an authorization may be issued only when the competent authority is satisfied that "all appropriate preventive measures against air pollution have been taken, including *the application of the best available technology, provided that the application of the measures does not entail excessive costs*" (emphasis added), the use of plant will not cause significant pollution, none of the emission limit values applicable will be exceeded, and all the air quality limit values applicable will be taken into account

118 Directive 88/609, OJ 1988, L 336/1, 7.12 88

119 Haigh, *supra*, note 99, pp 237-8

relating to the compliance with the limit values set in Annexes to the Directives for SO_2, NO_x and dust [120] They must also draw up appropriate programmes not later than 1 July 1990 for the progressive reduction of total annual emissions from existing plants (those licenced before 1 July 1987) [121] Other Member States must be consulted and supplied with information in accordance with the EIA Directive, if these plants are likely to have significant transboundary environmental impacts [122] As in the framework Directive under which it was adopted, the requirements set by this Directive are not particularly stringent, especially in view of the number of derogations from its provisions which are allowed and the emphasis it places on measures based on technical and economic constraints in order to avoid excessive costs. However, its most important innovative feature relevant to conformity with international environmental requirements is that it does not stipulate a uniform reduction of SO_2 and NO_x for all Member States Account is taken of the economic, geographical, and fuel circumstances of the various Member States so that different reduction targets are set for each. Thus, while some countries are required to reduce their emissions by specified amount or percentage, others are allowed to increase their emissions.[123] The Directive has thus been regarded as an appropriate model for other international and regional environmental agreements.

It is not possible here to describe in all detail EC legislation on air pollution control Suffice to say that, apart from the issues and approaches mentioned above, the EC has also adopted a number of laws to deal with control of production, consumption and

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120 Articles 4 and 17 Member States may set more stringent limit values and time limits, as well as include other pollutants in their requirements

121 Article 3.

122 Article 12

123 See Annexes I and II for details For example, while Belgium, Germany, France and Netherlands are required to reduce their SO_2 from their 1980 emissions by 60% by 1998, Greece, Ireland and Portugal are allowed to increase their emissions by 6%, 25% and 135% respectively Similarly with respect to NO_x, Belgium, Germany, France, Luxembourg and Netherlands are required to reduce their emissions over the same period by 40%, while Greece, Ireland and Portugal are allowed to increase their emissions by 94%, 79% and 178% respectively. It is noteworthy that Spain is granted a temporary and limited derogation from the full application of the emission limit value of SO_2 fixed for new plants to allow for its energy and industrial growth

trading of ozone-depleting substances.[124] As far as greenhouse gases are concerned, Council Decision 93/389 of 24 June 1993 on a monitoring mechanism of Community CO_2, and other greenhouse gas emissions,[125] provides for actions to be taken by Member States to meet the Community's commitments under the 1992 FCCC Member States are required to devise, publish, and implement national programmes for limiting their anthropogenic emissions of CO_2 in order to contribute to the stabilization of CO_2 by 2000 at 1990 levels in the Community as a whole.[126] They must also determine their anthropogenic CO_2 emissions and the extent of removal of CO_2 by sinks, and report data annually to the Commission [127] Similar obligations are provided for with respect to other greenhouse gases [128] These instruments represent the Community's internal measures to meet its international commitments However, as far as the tackling of climate change issues is concerned, it is worth noting that Member States have found it difficult to agree on concrete strategies in order to reduce overall CO_2 emissions One of the proposals put forward by the Commission has been the use of economic instruments such as a carbon/energy tax, but this has met with tough opposition from some Member States and this option has been postponed Such experience signals that if regional agreement on this issue is hard to be reached within such a sophisticated and well developed structure as the EC's, it is hard to imagine what degree of cooperation might be possible in this regard in the more loosely structured and less developed organization of ASEAN.

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[124] Council regulation 594/91 on substances that deplete the ozone layer introduces more severe control measures than the Montreal Protocol for the importation, export, production and consumption of chlorofluorocarbons, other fully halogenated chlorofluorocarbons, halons, carbon tetrachloride, and 1,1,1-trichloroethane Allocation of import quotas have been set by various Commission Decisions In addition, Directive 92/72 on air pollution by ozone established a harmonized procedure for monitoring, exchanging information, and informing and warning the population with regard to air pollution by ozone. Member States must designate measuring stations to supply data for these purposes

[125] OJ L 167/31, 9 7 1993

[126] Article 1

[127] Article 3

[128] Article 7.

6.2 EC Laws for the Conservation of Biodiversity[129]

The EC is a Party to three treaties concerning the protection of biodiversity, namely the 1980 Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR),[130] the 1979 Berne Convention,[131] and the 1979 Bonn Convention.[132] It has indicated an intention to become a Party to CITES[133] but CITES parties have not been responsive to the need to amend the Convention to provide for accession by economic integration bodies such as the EC/EU. However, as all Member States, except Ireland, are Party to the Convention, the EC has adopted harmonizing measures to implement it. At the Community level, the EC has enacted a number of *ad hoc* measures for the protection of species and their natural habitats. These address the conservation of wild birds[134], the implementation in the Community of CITES[135], common rules for imports of whales and other cetacean products[136]; the importation into Member States of skins of certain seal pup and products derived therefrom[137]; a community system for fisheries[138]; and the conservation of natural habitats and of wild fauna and flora.[139] Only the Directives on conservation of wild birds and on natural habitat and the Regulation on the implementation of CITES will be discussed here

Directive 79/409 on the conservation of wild birds (now largely replaced by the habitat Directive) provides for the conservation of all species of naturally occurring birds in the

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129 For a comprehensive discussion , see generally P. Birnie, *The European Community and Preservation of Biological Diversity*, in Bowman and Redgwell (eds), **International Law and the Conservation of Biological Diversity**, *supra*, Chapter 3, note 169, pp 211-234

130 **UKTS** 48 (1982), Cmnd 8714, 19 **ILM** (1980) 837 In force 7 April, 1981

131 Convention on the Conservation of European Wildlife and Natural Habitats, **UKTS** 56 (1982), Cmnd, 8738 In force 1 June, 1982

132 Convention on the Conservation of Migratory Species of Wild Animals, 19 **ILM** (1980) 15 In force 1 November, 1983

133 993 **UNTS** 243; **UKTS** 101 (1976), Cmnd 6647, 12 **ILM** (1973) 1085. In force 1 July, 1975.

134 Directive 79/409, **OJ** (1979) L103, 25 4.1979, p 1

135 Regulation 3626/82, **OJ** (1982) L384/1, p 1

136 Regulation 348/81, **OJ** (1981) L 39, 12 2 81.

137 Directive 83/129, **OJ** (1983), L 91/30, 9 4 83, as amended

138 Regulation 3760/92, **OJ** (1992), L 389, 31 12 92

139 Directive 92/43, **OJ** (1992), L 206/7, 22 7 92

wild state in the European territory of the Member States, except for Greenland. It applies to birds, their eggs, nests and habitats Member States are required to maintain the population of the species at a level which corresponds in particular to "ecological, scientific and cultural requirements".[140] They must also preserve, maintain or re-establish a sufficient diversity and area of habitat for all species of such birds [141] Annex I of the Directive lists bird species which are the subject of special conservation measures concerning their habitat. Member States must designate "special protection areas" for these species.[142] Similar measures must be taken for regularly occurring migratory species not listed in Annex I, as regards their breeding, moulting and wintering areas and staging posts along their migratory routes, with special attention to the protection of wetlands, particularly wetlands of international importance.[143] A general system of protection for all species must be established to prohibit, *inter alia*, deliberate killing or capture; deliberate destruction of, or damage to, their nests and eggs, or removal of their nests, taking and keeping of their eggs; deliberate disturbance, and keeping of birds of species the hunting and capture of which is prohibited.[144] Member States must also prohibit the sale, transport for sale, keeping for sale and the offering for sale of live and dead birds and of any readily recognizable parts or derivatives of such birds [145] However, some "acceptable exploitation" is allowed, subject to certain restrictions determined by Member States, with respect to species listed in Annex II (species with a high population level, geographical distribution and reproductive rate) the hunting of which may be permitted, and species listed in Annex III/2 trading in which may be permitted [146]

The Wild Birds Directive has been supplemented and to a certain extent superseded by

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[140] Article 2
[141] Article 3
[142] Article 4
[143] Article 4 (2)
[144] Article 5
[145] Article 6 (1)
[146] Articles 6 (3) and 7 (1)

the Habitat Directive of 1992. The main aim of Directive 92/43 on the conservation of natural habitats and of wild fauna and flora, which implements the Berne Convention for which the Council of Europe provides the Secretariat and Council, is to promote the maintenance of biodiversity, taking into account "economic, social and cultural requirements", through the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States.[147] A European ecological network of special areas of conservation, known as Natura 2000, is to be set up consisting of sites hosting the natural habitat types "of Community interest" whose conservation requires the designation of special areas of conservation (listed in Annex I), and habitats of species "of Community interest" whose conservation requires the designation of special areas of conservation (listed in Annex II).[148] Each member State must propose a list of sites indicating which natural habitat types in Annex I and which species in Annex II that are native to its territory the sites host.[149] From the lists submitted by Member States, the Commission will establish a list of sites "of Community importance" identifying those which host one or more priority natural habitat types (those in danger of disappearance) or priority species (species which are endangered and for the conservation of which the Community has particular responsibility).[150] Once a site of Community importance has been adopted, the Member State concerned must designate the site as a special area of conservation as soon as possible.[151] In the special areas of conservation, Member States must establish the necessary conservation measures and take appropriate steps to avoid the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the areas have been designated.[152] Of particular importance is the provision for Community co-financing

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147 Preamble, para 7, and Article 1

148 Article 3 Annex I lists 9 natural habitat types Annex II lists some 500 animal and plant species The Natura 2000 network includes the special protection areas classified under the 1979 Wild Birds Directive

149 Article 4. The list must be transmitted to the Commission within three years of the notification of this Directive

150 *Ibid* The list must be established within six years of the notification of the Directive

151 Article 4 (6).

152 Article 6.

of conservation measures to be undertaken by Member States This provision recognises that the adoption of conservation measures is a "common responsibility" of all Member States and may impose an excessive financial burden on certain Member States given the uneven distribution of priority natural habitats and priority species of Community interest throughout the Community, and the fact that the polluter pays principle can have only limited application in the special case of nature conservation.[153] As far as protection of species is concerned, Member States must establish "a system of strict protection" for the animal and plant species listed in Annex IV (animal and plant species of Community interest in need of strict protection). Such protection includes prohibition of all forms of deliberate capture or killing, deliberate disturbance, deliberate destruction or taking of eggs from the wild, and deterioration or destruction of breeding sites or resting places.[154] In the case of plant species, this include prohibition of deliberate picking, cutting, collecting, uprooting or destruction of such plants.[155] Keeping, transport and sale or exchange, and offering for sale or exchange of both animal and plant specimens taken from the wild are also prohibited.[156] On the whole the Habitat Directive is a "forward looking" piece of legislation, but its success will depend on the effectiveness of its implementation and the zeal with which it is enforced [157]

Finally, Regulation 3626/82 on the implementation in the Community of the Convention on international trade in endangered species of wild fauna and flora should be mentioned. It provides for stricter import measures for specimens of species covered by the Convention. The import into the Community of animal and plant species listed in Appendices I, II and III of the Convention are subject to presentation of an import

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153 Preamble, paras 16-7, and Article 8
154 Article 12
155 Article 13
156 Articles 12 (2) and 13 (1) (b)
157 For a critical analysis of the Directive, see Birnie, *supra*, note 129, pp 225-231 It is observed that although the Directive provides for co-financing, it is not clear how much financial resources would be allocated for this purpose Problems and difficulties in implementing the relevant laws are encountered even in the UK whose legislation in these matters are more advanced than that of most other EU States

permit or import certificate issued at the customs office at which the customs formalities are completed.[158] Certain species such as the *Felis geoffroyi* and *Felis wiedii* species, as well as whales or other cetacean products which are listed in Appendix II of CITES are treated as if they were listed in Appendix I of the Convention. These provisions together with other EC legislation such as Regulation 348/81 on common rules for imports of whales or other cetacean products (which requires an import licence) and Directive 83/129 concerning the importation into Member States of skins of certain seal pups and products derived therefrom (which prohibits commercial import of skins of whitecoat pups of harp seals and of pups of hooded seals) mean that, at least as far as the substantive provisions are concerned, the Community laws regulating trade in wild fauna and flora are generally stricter than those in the rest of the international community.

This does not necessarily mean that the EC regime provides a satisfactorily effective control and protection of species Problems concerning the implementation of CITES are acute in the EC as in other countries, and indeed it can be argued that the abolition of border controls of persons and goods in the EC since January, 1993 has loosened the control of species trading within the Community even further. According to a study by the CITES Secretariat on the implementation of the Convention within the European Union, several serious problems exist with regard to this.[159] Problems concerning

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158 Article 5 This requirement is stricter than CITES which only requires import permits in the case of species listed in Appendix I According to Article 10 (b) of the Regulation, the import permit must be issued only where, *inter alia*, the applicant presents "trustworthy evidence" that the capture or collection of the specimen in the wild will not have a harmful effect on the conservation of species or on the extent of the territory occupied by them, the applicant provides proof by means of documents issued by the competent authorities of the country of origin that the specimen has been obtained in accordance with the legislation on protection of the species in question, and in the case of the importation of a living animal, the applicant provides evidence that the intended recipient possess adequate facilities suitable for accommodating the species

To date, the only case concerning infringement of the Regulation is *EC Commission v France* (1990) ECR 4337, concerning France's issue of import permits for more than 6,000 wild-cat skins The ECJ found France had failed to fulfil its obligations, see Krämer, **European Environmental Law Casebook**, *supra*, note 12,, pp.207-15.

159 *CITES Doc. 9 23, Ninth Meeting of the Conference of the Parties*, Fort Lauderdale (U.S A), 7-18 November, 1994 Problems discussed include, *inter alia*, the issue of re-export

adequacy of staff and funding were also mentioned; despite the increase in EU Member States since 1983, the number of Commission staff directly involved in implementation of CITES had remained unchanged [160] The Secretariat suggested that the main reason for the problems was that "the EU implements CITES as if it were a single State, yet its Management Authorities are virtually independent and procedures vary enormously from one Member State to another", and that "because internal border controls have been abolished and the degree of CITES implementation varies considerably from one Member State to another, in reality the degree of CITES implementation in the EU is that of the State with the lowest implementation level".[161] Unless these problems are resolved, it can be questioned whether the EC approach is appropriate for the control of trading in species.[162] However, with respect to the protection of habitats and species in general, the EC approach can be viewed in a more positive light. The creation of a European network of special protection areas probably generates the incentives for Member States, especially those lacking relevant national legislation, to embark on

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certificates for specimens not imported into the EU in accordance with the Convention, abusive use of import permits/certificates or EU certificates, acceptance of irregular documents for the issue of import permits or certificates, especially when verification of the validity of documents is undertaken at the border by officials who may have received insufficient training, inadequate border controls, absence or insufficient co-ordination between Member States, absence of a centralized administration for the issue of EU certificates; and the lack of adequate and harmonized controls at the external borders of the EU

160 *Ibid*, p 14

161 *Ibid*, p 4 Also, in its conclusions and recommendations, the Secretariat observed again that "it seems absurd that within an economic territory with no internal border controls, each Member State continues to administrate on a virtually independent basis the issue of permits and certificates, with almost no possibility to verify information as to the whereabouts of the specimens concerned or as to their origins"; *ibid*, p 14

162 It is worth noting that at the time of writing, the EC Commission has submitted to the EP an "amended proposal for a Council Regulation on the protection of species of wild fauna and flora by regulating trade therein"; see *EU Doc 7654/1/95, Rev 1, Env 114*, 12 June, 1995 If approved by the Council and EP, it will repeal Regulation 3626/82. This new draft is based, for the first time, solely on Article 130s (1) of the EEC Treaty Some of its interesting features include more detailed obligations on Member States for effective implementation of CITES (e g duty to consult the management authority of another Member State where an application for a re-export certificate concerns specimens brought into the Community under an import permit issued by that Member State, and duty to inform the Commission of the rejection, and the reasons for it, by a Member State of an application for a permit or certificate "in case of significance" etc.); and the creation of a scientific review group consisting of representatives from Member States to advise the Commission on scientific questions relating to the implementation of the Regulation, and a Committee to assist the Commission.

conservation efforts and there is evidence that intervention by the Community in an administrative decision adversely affecting natural habitats can produce environmentally positive results.[163]

6.3 EC Laws on Environmental Impact Assessment

The Directive on Assessment of the Effects of Certain Public and Private Projects on the Environment was adopted unanimously by the then 10 Member States on 27 June, 1985.[164] Although its provision were somewhat watered down by the Council, it marks a fundamental step in Community environmental policy in that it truly represents the implementation of the preventive approach to environmental problems.[165] The Directive requires Member States to adopt all measures necessary to ensure that projects likely to have significant effects on the environment by virtue *inter alia* of their nature, size or location are made subject to an assessment with regard to their effects [166] Projects are classified into two categories,[167] i.e. Annex I projects for which EIA is mandatory,[168] and Annex II projects for which EIA will be required only if the Member State itself considers that their characteristics so require.[169] However, defence projects and certain other specific national projects are exempted and Member States may also exceptionally exempt specific projects.

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[163] For instance, the Commission's action on a complaint against the U K. Government for an infringement of the Wild Birds Directive with respect to permission granted to a distillery to develop moorland on the Isle of Islay in Western Scotland for digging peat resulted in the distillery deciding, urged by the U K. Government following an EC official's visit to the island, not to exploit the site for that purpose See Haigh, *supra*, note 99, pp 231-3

[164] Directive 85/337, OJ 1985 L 175/1, 5 7.85. Member States were required to comply with the Directives within three years of its notification

[165] Johnson and Corcelle, *supra*, note 2, p 255.

[166] Article 2 (1) According to Article 3, the environmental effects include both direct and indirect effects of the project on human beings, fauna and flora, soil, water, air, climate and the landscape, the interaction between the afore-mentioned factors, and the material assets and the cultural heritage.

[167] Article 4

[168] There are nine types of projects listed under Annex I; e.g. certain oil refineries and installations and power stations, other combustion installations, nuclear power stations and reactors, and transport facilities

[169] Annex II projects are divided into 12 classes which are further classified into over 80 types of projects, ranging from big projects such as industrial installations and infrastructure projects to small ones like poultry or pig-rearing, and knackers' yards.

Procedures for conducting an EIA under the Directive are laid down in detail therein They include detailed arrangements for provision of information and conducting consultation processes [170] Provision is also made for supplying of information to and consulting with neighbouring Member States likely to be significantly affected.[171] Member States must take all the information acquired into consideration in their development consent procedure [172] They retain the right to adopt stricter rules governing EIA procedure.[173]

The Directive is by no means far-reaching, it gives vast discretion to Member States in various matters such as the determination of projects under Annex II which are to be subject to EIA procedure, the exemption of projects from the Directive, the determination of what constitutes "significant environmental effects" and of the details governing the consultation process. It can be dispensed with in a wide range of developments and is thus open to abuse, though, as a Treaty obligation this should be exercised in good faith. In effect, it provides only a framework for EIA requirements though the projects listed under Annex I are expressed in clear enough terms to give rise to a contention that the Directive has a direct effect. There are also problems concerning the implementation of the Directive[174] and failure to assess the impact of specific projects is the commonest subject of complaint to the Commission. But, despite these criticism, it can be regarded as a significant step forward in harmonising EIA procedure in the Member States.

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[170] See Articles 5 (2), 6 (1) (2) and (3) These include the determination of the public concerned, places of and the manner in which consultation is to be conducted, which are left to be decided by the Member States

[171] Article 7.

[172] Article 8

[173] Article 13

[174] OJ (1994) C 154/1, at p 45 According to the Eleventh Annual Report of the Commission to the Parliament on Monitoring the Application of Community Law, a substantial share of infringements of Community's environmental directives relate to this EIA Directive

6.4 EC Laws on the Right to Environmental Information

A Directive on the Freedom of Access to Information on the Environment was adopted by the Council on 7 June 1990.[175] It represents another attempt at the Community level to promote public involvement in the enforcement of environmental regulations "Information relating to the environment" is defined as meaning any available information in written, visual, aural or data-base form on the state of water, air, soil, fauna, flora, land and natural sites, and on activities or measures adversely affecting or likely to affect these, and on activities or measures designed to protect them, including administrative measures and environmental management programmes.[176] Member States must ensure that "public authorities" are required to make available information relating to the environment to any natural or legal person at his or her request *without their having to prove an interest* (emphasis added). It is essential to note that persons requesting the information can be any one in and outside the EC and they need not establish a legal interest in the matter This is a liberal provision opening the way for public involvement because acquisition of information is significant for enforcement of environmental laws, especially as it can contribute to more effective complaint and litigation by the public and environmental groups. A public authority must speedily respond to a request for information, and reasons for a refusal must be given.[177] Moreover, a person who considers that his or her request has been "unreasonably refused or ignored, or has been inadequately answered by a public authority may seek a judicial or administrative review of the decision *in accordance with the relevant national legal system*" (emphasis added) [178]

There are some problems relating to the substantive provisions and the interpretation and

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[175] Directive 90/313, OJ 1990, L 158, 23 6 90 According to Article 9 of the Directive, Member States are required to enact legislation to comply with the Directive by 31 December 1992 at the latest

[176] Article 2 (a)

[177] i e. in 2 months, Article 3 (4)

[178] Article 4

implementation of the Directive [179] It permits Member States to refuse a request on numerous grounds, some of which are clearly open to abuse by public authorities. Although these problems will undoubtedly undermine the effectiveness of the Directive to a certain extent, it remains the first of its kind at a regional level and can fairly be said to mark a significant, concrete step forward towards greater public participation which can be used as a model by other regions.

7. Conclusions

The Chapter has surveyed the EC's activities in various sectors in the field of the environment, problems concerning the relevant substantive laws and their implementation, as well as the infrastructure supporting the EC's work in this regard. Although the EC cannot be regarded as a perfect model and, as illustrated, there are numerous problems associated with the approach taken by the organization, the general achievements of the EC are in marked contrast to those of ASEAN, which is only just beginning to address the need for environmental management seriously The EC's environmental activities have progressed considerably since 1973 and are now generally regarded, despite their limitations, as one of the more successful areas of Community action. In the final analysis, the assessment of the EC's success in this respect depends on the contribution that the EC makes towards the improvement of the environment, or as observed by Freestone, "whether the existence of the Community environmental policy, as opposed to twelve national environmental policies, represents an added advantage for environmental protection in Europe or indeed the world".[180] Most writers consider that it does [181] Although it has often been suggested that EC's harmonised standards mean that the eventual standards set are those of the lowest

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[179] For details, see M Wheeler, *The Right to Know in the European Union*, 3 **RECIEL** (1994) p 1, of importance among these are the questions of what bodies are covered by the Directive's requirement to provide information and whether refusal of information on the grounds allowed by the Directive will be abused, for instance, it is not clear whether bodies subject to the Directive include privatised bodies responsible for the supply of water, gas, and electricity

[180] Freestone, *supra*, note 38, pp 147-8.

[181] See for example, *ibid* , and Kramer, **EC Treaty and Environmental Law**, *supra*, note 2, pp 157-8

common denominator, the EC's approach does allow Member States to adopt stricter environmental standards in many cases and this allowance is invariably stipulated in its numerous environmental instruments. As environmental awareness grows both among the public and the EC institutions, it is predictable that the opportunities provided for Member States to adopt stricter standards will be even more acted upon in future Commentators generally agree that legislative initiatives in many Member States to protect the environment are often prompted by the need to implement environmental measures adopted at the Community level. In short, the EC's environmental policy "does more to encourage the laggards than to hold back the leaders".[182]

It is foreseeable that the EC will expand its activities in this field even further, despite the doctrine of subsidiarity. The EP, with the greater involvement in decision-making now allowed will no doubt act to accelerate this trend In recent years, the EC has also introduced new, innovative market-based techniques to protect the environment such as an eco-label award scheme[183] and an eco-management and audit scheme.[184] The Commission is currently proposing a carbon/energy tax as a means of stabilising or reducing CO_2 and other greenhouse gases in order to meet the Community's commitments under the FCCC. However, at least for the time being, agreement on use of economic instruments will be hard to achieve among the Member States This experience, given that the EC was an important and active actor in negotiating the FCCC, does not offer a promising prospect for the Convention's implementation in the context of other regional organizations, especially one as unsophisticated as ASEAN, many of whose rapidly developing members tend to give priority to economic development over environmental concerns. However, UNCED's Agenda 21 and the Rio

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[182] Freestone, *op cit*, p 148 See also G Bennett, **Air Pollution Control in the European Community : Implementation of the EC Directives in the Twelve Member States**, Graham & Trotman, London/ Dordrecht/Boston, 1991, p 199, which concludes that EC air pollution control Directives have had clear impact on the practice of air pollution control in all Member States, especially the laggards and led to the introduction of binding air quality standards

[183] Regulation 880/92 on a Community eco-label award scheme, **OJ** (1992), L 99, 11 4 92 details the scheme

[184] Regulation 1836/93, **OJ**(1993), L 168/1, 10 7 93 details this scheme

Declaration point the need for a balance to be achieved between these concerns The question arises, therefore, whether the capacity building required by Agenda 21 requires the establishment by ASEAN of a regional infrastructure, following the EC model.

It cannot be denied that the EC's achievements in environmental regulation have, viewed from the perspective of the Rome Treaty's failure to provide for environmental protection, been impressive. However, one cannot overlook the fact that problems concerning implementation and enforcement of Community environmental laws will continue to increase especially when activities in this area expand further and increasingly affect domestic environmental policies. It is foreseeable that the Commission's ability to monitor compliance will continue to be constrained by its limited resources and that Member States' compliance will vary, especially in the absence of effective NGO monitoring and other activities. Thus, there is room for improving public participation in the enforcement of Community laws as the EC has realised in its Information Directive, although the rules concerning *locus standi* for NGOs and others remain restricted.

Finally, it is important to ask how far the EC as a relatively successful regional regime for dealing with environmental problems can be taken as a model for the development of ASEAN's activities in this field. As a regional organization originally intended for the advancement of trade and economic integration, the EC has found it necessary to strike a balance between trade and environment to achieve sustainable development ASEAN's aims and problems bear some similarity to the EC's in so far as it strives to achieve economic cooperation, albeit with much less success It is possible that ASEAN will, in its pursuit of UNCED policies, realise in time the need to integrate environmental considerations into its economic activities. Yet there is a striking difference between the EC and ASEAN : the EC's initial interest in legislating for environmental matters was significantly prompted by the desire to harmonise environmental standards in order to prevent distortions in trade between Member States. At present, the amount of intra-

ASEAN trade has not reached a level which generates such incentive. Thus, unless ASEAN becomes interested in environmental protection for its own sake, it may be a long time before environmental policy can be developed to this extent within ASEAN.

The preliminary survey of ASEAN's activities in the environmental field in Chapter 7 indicates that at present ASEAN has only superficial interest in environmental protection and there is little evidence of any real political commitment to it. There has certainly been no dearth of political statements in the form of declarations and resolutions by ASEAN environment Ministers in the past decade, but these have resulted in little action, except administration of some peripheral environmental projects With their preoccupation with economic matters, especially the creation of a free trade area, and the assertion of their right to development, it is unlikely that ASEAN member countries will in the near future, as the EC has done, accord environmental protection the same importance as that given to economic concern

Another crucial element which distinguishes the EC from ASEAN is in the composition of their membership. The EC is made up mainly of developed countries, though admittedly at various stages of development, with the capability to finance its infrastructure and aid the less developed Member States to meet their environmental obligations financially and technically. In contrast, ASEAN is composed wholly of developing countries which are still striving for better living standards for their population Thus, it may be natural and predictable that ASEAN is in no position to advance environmental objectives given the problems of limited financial resources This raises the fundamental question of whether it is possible to apply the EC approach to ASEAN at all. Although it is desirable, and indeed in many instances necessary, to address environmental problems through regional as well as international cooperation, such an approach may not be feasible for regional groupings of developing countries This emphasises the fact that effective international solutions to global environmental problems cannot be devised in isolation from the need to adjust the national economies

of developing states and the international economic system in order to address the problems with regard to poverty and low living standards in developing countries if environmental goals are to be achieved, as Agenda 21 emphasises in its "cross-cutting" issues The EC model certainly highlights these needs.

Chapter 9

The Way Forward

Although the concept of sustainable development is still evolving, there is a general agreement that it has become highly significant in the development of international environmental law. As identified in Chapter 1, many principles have been associated with the concept, some of which are more widely accepted than others Among these, the precautionary principle, the polluter pays principle and the principle of public participation appear to have more practical impact on achievement of sustainable development, while others, such as the principles of common concern and intergenerational equity are still, at least at the present stage, confined to academic debate although they are also important in the development of the concept. Another essential principle behind the concept is the integration of environment and development which implies the need to incorporate environmental considerations into developmental process In this respect, the competing rights to a healthy environment and the right to development have also been relevant in the sustainable development debate To a large extent, UNCED and Agenda 21 have added further impetus to the development of the concept

It should be pointed out that the normative character of the concept and the various principles associated with it is still presently unclear. The concept has been seen by some as a mere "international ideology, or goal or process, or process of thinking".[1] On the other hand, the concept has been regarded as a "legal principle" consisting of a few other core legal principles [2] In addition, several principles have been considered to be related

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[1] G Handl, *Sustainable Development . General Rules versus Specific Obligations*, in W Lang (ed), **Sustainable Development and International Law**, Graham & Trotman / Martinus Nijhoff, 1995, pp 35-43, at pp 36-37

[2] P. Sands, *International Law in the Field of Sustainable Development Emerging Legal Principles*, in Lang, *ibid* , pp 53-66, at 57-62

to sustainable development.[3] However, in identifying principles associated with the concept of sustainable development, it is important to distinguish whether the particular principle is a "legal principle" which forms a basis for developing further substantive obligations, as opposed to a "guiding principle", or a mere "concept", since the interchangeable use of the terms can cause confusion as to the specific obligations involved and does not contribute positively to the development of the concept which the principles are intended to serve.[4] Moreover, it can be argued that the various principles, such as those referred to in the Preamble of the FCCC and the CBD, constitute only guiding principles because they lack the "degree of specificity required to form a binding legal precept" which would create substantive obligations.[5] Even when "principles" are contained among the substantive provisions of a Convention, such as Article 3 of the FCCC which includes, *inter alia*, the principles of precaution and common but differentiated responsibilities, it still does not mean that they are necessarily legal principles [6] In such instance, they may serve as guiding principles for future negotiations of legal instruments, as well as development of further detailed and binding obligations. The debate on the status of particular principles or concepts is particularly relevant when we consider what substantive obligations, if any, can be derived from them for both developed and developing countries to achieve sustainable development. Their status in the development of the international law of sustainable development will need to be further investigated in future studies.

To implement sustainable development in developing countries, the conventional question since the 1972 UNCHE has always been how to balance environmental protection and the

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[3] *Ibid*, pp 62-66 These are Principle 21 of UNCHE Declaration, the principles of good neighbourliness, common but differentiated responsibilities, good governance, preventive action, precaution and polluter pays

[4] H Mann, *Comment on the Paper by Philippe Sands*, in Lang, *supra*, note 1, pp 66-72

[5] *Ibid*, *p 68*

[6] *Ibid* The *chapeau* of Article 3, titled "Principles", expressly states that the Parties "shall be guided" by the principles to achieve the objective and to implement the provisions of the Convention

need of these countries to develop in order to eradicate poverty and underdevelopment among their citizens. Based on the principle of "common but differentiated responsibilities", it is generally accepted that while environmental problems, especially those affecting the global commons such as air pollution, depletion of the ozone layer, climate change, deforestation and the loss of biodiversity, can no longer be regarded as matters solely within sovereign jurisdiction, developed countries, in view of their historical responsibilities for the present state of environmental degradation, must bear the principal burden for international environmental protection. However, on the basis of the principle of "common concern", developing countries must arguably accept some limits on their sovereignty with regard to the use of natural resources and the carrying out of activities within their jurisdiction which have environmental impacts on areas or resources of "common concern" as well as on areas within other States' jurisdiction and global commons. In accepting this responsibility, which benefits the international community, developed countries must provide developing countries with financial resources and technology necessary for implementing their environmental obligations as the latter still lack adequate means to carry these out. Provision of financial resources and differential treatment for developing countries is also in line with the arguments for the New International Economic Order (NIEO) advocated by developing countries even before 1972.[7] In this context, it has been observed that most modern environmental treaties impose only "soft responsibility", as opposed to binding obligations, with no real enforcement mechanism [8] Similarly, it has been submitted that the concept of common but differentiated responsibilities "places on developing countries only a highly conditional form of obligation to meet the standards of environmental protection and sustainable development undertaken by developed states" and "it is no longer clear that

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[7] D B Magraw, *Legal Treatment of Developing Countries . Differential, Contextual and Absolute Norms*, 1 **Colo. JIELP** (1990) p 69, at pp. 77-80.

[8] M Koskenniemi, *Comment on the Paper on "Active Compliance Management in Environmental Treaties"*, in Lang, *supra*, note 1, pp 91-96, at pp 94-95.

we are in any real sense looking at legal obligations when formulated in this formula" [9] This highlights the need, as mentioned above, to examine further the status of the relevant principles and concepts and their legal implications

Therefore, the crucial question upon which the implementation of sustainable development depends concerns the amounts of resources committed and of technology transferred to this purpose. Experience is showing that the effectiveness of environmental treaties rests largely on the extent of this commitment. For this purpose, various funds have been set up under numerous environmental treaties to promote compliance, including the World Heritage Fund (WHF), CITES Trust Fund, the Mediterranean Trust Fund, and the Montreal Protocol's Multilateral Fund.[10] Although both the FCCC and the CBD provide for developed countries' commitment in this regard, neither of them specifies the extent or the amount of such commitment. One of the problems is how to determine the "agreed full incremental costs" of implementing measures required by the Conventions.[11] The GEF has interpreted the term as referring to the extra costs incurred in redesigning an activity in order to address global environmental problems, i.e. "that part of the expenditure that is not offset by nationally appropriated benefits" [12] While it is conceivable that the concept can be applied to a certain extent under the Montreal Protocol (e g. costs incurred from installing new equipment not using ODSs), it becomes more difficult in the context of the FCCC and the CBD. In particular, it is often not possible to differentiate between global benefits and national benefits in order to derive

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9 A Boyle, *Comment on the Paper on "Capacity-Building in Environmental Law and Sustainable Development*, in Lang, *ibid* , pp 137-140, at p 139.

10 See P H Sand, *The Potential Impact of the Global Environmental Facility of the World Bank, UNDP and UNEP*, paper presented at the Symposium on "Enforcing Environmental Standards . Economic Mechanisms As a Viable Means ?", Heidelberg, 5-7 July 1995, pp 4-8, publication forthcoming

11 Article 4 (3) of the FCCC and Article 20 (2) CBD. Similar provision is provided in Article 10 of the Montreal Protocol and Para 2 of the Instrument for the Establishment of the Restructured GEF

12 S Johnson, *Financial Aid, Biodiversity and International Law*, in Bowman and Redgwell (eds), **International Law and the Conservation of Biodiversity**, *op cit* , pp 271-288, at p 273

incremental costs. As observed by one writer, "in the case of biodiversity, the concept becomes almost devoid of meaning or even of relevance, since the alternative to a conservation project would be the absence of such a project, which leads to the conclusion that the entire cost of the project is incremental".[13] Thus, at least at the present stage, the concept is still too vague to provide any effective guidance to the amount of financial resources that developed countries are required to commit. Apart from the problem of determining incremental costs, both the FCCC and the CBD contain an innovative provision which implies in effect that the extent of the fulfilment of developing countries' obligations to implement the treaties concerned depends on the adequacy of the resources provided and technology transferred by developed countries, as required by the Conventions. For example also, developing countries consistently demand the fulfilment of developed countries' financial obligations as a precondition for undertaking further stringent control over their use of ODSs, as required by the Montreal Protocol

It is, therefore, important to consider whether developed countries are prepared to commit or capable of committing "adequate" resources, as demanded by developing countries, and if not, what will be the consequences of failure to do so and the solutions in such a situation.. As seen in Chapter 3, developed countries are wary of further defining this obligation and this is clearly demonstrated by declarations made by some of them upon signing the CBD that their obligation to provide financial resources under the Convention cannot be interpreted by the COP to determine "the amount, nature, frequency or size of the contributions" they are required to commit.[14] As suggested by one writer, the amount of financial resources provided at present under various environmental treaties represents only a fraction of what is needed to protect the global

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13 *Ibid*

14 See Declaration of the UK and Northern Ireland upon signing the CBD, reprinted in Sands, **Documents in International Environmental Law**, Vol IIA, p 873

environment.[15] The GEF still represents by far the most significant environmental trust fund and has been replenished by US$ 2 02 billion for the period from 1994 to 1997. However, it is widely recognised that even this amount is wholly insufficient to enable developing countries to achieve sustainable development. It has, for example, been estimated that the annual cost of implementing from 1993-2000 the following programmes or strategies advocated by Agenda 21 would be : US$ 20 billion in international grants or concessional financing to support sustainable activities in energy, transport, industry and land use, US$ 160-590 million on grant or concessional terms to replace CFCs and other ODSs; US$ 32 billion, including US$ 3.2 billion in international grants or concessional funding to combat deforestation, and US$ 3 5 billion, half of which would have to come from international sources on grant or concessional terms, to conserve biodiversity.[16] Whatever the position held by developed and developing countries, it is unrealistic to expect anything approaching the figures cited above to be provided by the former, at least in the foreseeable future, given their present general reluctance to do so, partly because of the economic recessions experienced in some of them It is not exaggerating to predict that there will be a slower rather than a faster flow of funds from developed to developing countries. Thus, if developing countries continue to insist strictly on adequate provision of resources as a precondition for compliance with environmental obligations, it can be expected that this will result in the sacrifice of the quality of the global environment to the detriment of all States, irrespective of national

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[15] *Ibid* , p 3, for instance, the annual budget of UNEP's core Environment Fund is about US$ 60 million, and the CITES and Mediterranean Trust Funds have an annual income of about US$ 4 and 7 million respectively The Montreal Protocol's Multilateral Fund provides a larger sum - US$ 510 million - for 1994-96 According to the World Heritage Centre, the WHF is currently allocating one-third (out of its annual income of US$ 4 million) to the protection of natural heritage sites

[16] N Robinson (ed), **International Protection of the Environment : Agenda 21 and the UNCED Proceedings**, Oceana Publication, New York, 1992, pp 1-liii, lxi. It is worth noting that under Agenda 21, developed countries reaffirm their commitments to reach the accepted UN target of 0 7% of GNP for overseas development assistance and, to the extent that they have not yet achieved that target, agree to augment their aid programmes in order to reach that target as soon as possible

boundaries. To avoid this undesirable and possibly catastrophic consequence, some modification of the attitudes of both developed and developing countries is required

It cannot be disputed that developed countries, in view of the adverse environmental impacts of their earlier industrial development, are largely responsible for the present state of environmental pollution. While it has been argued that this does not provide adequate ground for developing countries to follow the same path, or indeed repeat the same mistakes, it remains inequitable that developed countries should have the right to continue to pollute and to consume as much energy and other materials as they still do. Agenda 21, recent Conventions and declarations and international court decisions increasingly refer to the need for "equitable" approaches and solutions. Yet, although Agenda 21 recommends changes in consumption patterns in industrial countries, it is difficult to discern any efforts in this direction among Northern countries despite persistent demands that developing countries should intensify their conservation efforts Since UNCED, few substantial official campaigns for energy saving or discouraging wasteful consumption in developed countries have been observed, certainly not in the UK where this research has been conducted, although NGOs do promote this. In contrast, campaigns to save energy and to combat deforestation are now appearing in the Thai media, both those sponsored by governmental agencies concerned and by the private sector. This observation may appear trivial, but it does raise the question of whether developed countries are sincere in the commitment undertaken at UNCED and doing enough domestically to fulfil them apart from calling developing countries to sacrifice their economic interests for the sake of environmental protection. It is a point not to be taken lightly since it influences developing countries' attitudes towards cooperating with the North for purposes of protecting the global environment. Developed countries must now demonstrate their willingness to undertake a genuine lead in solving such environmental problems as reduction of pollution emissions, combatting deforestation (as they themselves call for tropical countries to do), introduction of energy tax and reduction in the consumption of energy and wasteful material. This is particularly so in view of their historical

responsibility for environmental problems, as recognised in the Rio Declaration, and their reluctance to commit adequate resources to assist developing countries in this regard, or, arguably, their current incapability of so doing

On the other hand, developing countries themselves should admit some limitation on their developmental process in order to avoid repeating the mistakes made by developed countries. To insist intransigently on the right to development without accommodating environmental interests will result in further global environmental degradation which will have adverse effects for present and future generations regardless of their nationalities. Experience in rapidly growing economies such as Thailand has shown that economic development without proper environmental management can stifle the developmental process itself. Therefore it is in developing States' own interests that regard be paid to environmental protection To a certain extent this appears to have been realised by Thailand, as evidenced by its review and subsequent overhaul of environmental legislation since 1992.

In responding to domestic as well as environmental problems, it is neither realistic nor adequate for developing countries to rely solely on resource flows from developed countries, though these should be encouraged to the maximum extent possible in order to speed up achievement of UNCED's aims of sustainable development. As discussed above, there is no prospect that developed countries will be able to fulfil their obligations as demanded by developing countries. No matter how morally wrong this may seem to developing countries, they need to commit more of their own resources for environmental protection without waiting until developed countries have fulfilled their obligations to the extent considered "adequate" by them. Many have after all committed themselves to a variety of relevant obligations in treaties to which they have become Party, and many declarations, as well as Agenda 21, have commanded consensus.

This thesis has shown that Thailand is entering on the age of more environmental awareness through adoption of legal measures and policies that accord with the goals and requirements of international environmental law As evidenced in Chapters 4 and 5, a number of substantive measures have been taken to control air pollution. An outstanding achievement is the ability conferred on Thai authorities since 1 January 1996 to prohibit use of leaded petrol throughout the country, a step that has yet to be taken by the EU. Although this may have been dictated by the gravity of urban air pollution, especially in Bangkok, it evidences the trend that Thailand is moving towards tighter air pollution control. Despite the deficiencies discussed in Chapters 4 and 5, the NEQA 1992 provides a landmark towards a new era of environmental control. The Act has created the necessary administrative structure for environmental management through the elevation of the NEB and the establishment of the three new Departments responsible for environmental control under MOSTE. Better procedures for and more extensive coverage of projects governing the conduct of EIA have been introduced An Environmental Fund (standing at present at about 6,000 million baht or US$ 240 million) was created to promote environmental management plans Extensive powers have been given to pollution control officials to fill any gaps in implementation of environmental laws by other relevant governmental agencies. The Act enables designation of "conservation zones", "environmental protection zones" and "pollution control zones" where more stringent environmental standards may apply. It also incorporates various principles associated with the concept of sustainable development, in particular the polluter pays principle and the principle of public participation. Another significant impact, prompted by the extensive mandate provided for MOSTE under the Act, is the creation of Regional Environmental Offices in various regions of the country to supervise and advise on the implementation of environmental law. Decentralisation of environmental management, which is provided for by devolution to the provincial level of preparation of the environmental management plans required to be initiated by the provinces, is also an underlying philosophy of the Act.

Despite its numerous innovative provisions, the impacts of the Act have been less far-reaching than initially expected The performance of duties by MOSTE environmental officials and pollution control officials appointed under the Act has been largely supervisory due to the complacency of the officials concerned. To date, no area has been declared a conservation zone and little change has been brought about in the three environmental protection zones and six pollution control zones which have so far been declared (see Chapter 4). The major reason for this lies in the impossibility of effectively supervising such areas with the low level of manpower at present possessed by the Pollution Control Department, which is comprised of only about 200 persons.[17] Inadequate manpower also means that MOSTE lacks the capacity to ensure that the measures specified in EIA reports are actually carried out. The Environmental Fund has not been utilised as expected because most agencies concerned, including provincial governmental agencies, prefer to draw on governmental budgetary sources rather than secure a loan from the Fund, albeit at a low-interest rate [18] Nor has the Fund been satisfactorily utilised by NGOs, though this is permitted by the Act.[19] To date, only one test case, the text of which is included in Appendix IV, has been brought to court under the Act to challenge administrative actions affecting the environment, the right to a healthy environment and the right to environmental information [20]

On the whole, however, the Act has brought about positive changes in environmental management in Thailand Certainly more attention is now being given to environmental problems than in the period before 1992. The trend towards greater environmental awareness is irreversible and this has brought about more governmental accountability, at

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[17] Interview conducted by the writer with the Director of the Northern Regional Environmental Office, 18 January 1996.
[18] *Ibid*
[19] See Chapter 4. It is interesting to note however that a few NGOs in the North have been allocated governmental budgets for the 1997 fiscal year to conduct environmental activities, mostly consciousness raising campaigns Thus appears to be the only region where NGOs have been involved and it is largely due to the initiative of the Regional Director at the time of writing
[20] For discussion, see Chapter 4 and Appendix IV

least in the form of criticism in the media. Although, as remarked by the writer in Chapter 5, the Act has not led to more stringent air quality standards, new air quality standards are being proposed at the time of writing and the Department of Pollution control aims within the next year to introduce an action plan to deal with air and noise pollution caused by vehicles and to introduce more stringent air quality standards, based on European standards (presumably EC standards), on a gradual basis starting in 1996, with the second step beginning in 1999 [21]

More worrying is the weakness of control over emissions from industrial plants which is still left largely to the DIW. As observed in Chapter 5, the 1992 Factory Act has the effect of loosening control over smaller industrial plants to facilitate industrial development. At present, MOSTE's officials play little role in factory inspection although some joint inspection was carried out during the period following the enactment of the 1992 NEQA However, this has now stopped due largely to MOSTE's inadequate manpower but partly to the reluctance of the latter to intervene in the work of DIW's officials Thus, despite the extensive powers given by the Act to MOSTE's officials and pollution control officials appointed by it, these powers are rarely exercised in practice. In fact, no such case has been noted although complaints to these officials are sometimes brought to the attention of DIW's officials with request to rectify the problems. The same situation applies in the case of industrial estates the administration of which is independent to the DIW. It has been admitted by one senior official that most industrial estates still lack proper system for treatment of pollution and this is beyond the control of the Pollution Control Department.[22] Therefore, unless this problem of MOSTE's environmental staff shortage is improved, the Act's effectiveness in the future will be seriously undermined

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[21] Press interview with Director of the Pollution Control Department, reported in **The Manager**, Bangkok, 21 September 1995, p 12

[22] *The Pollution Control Department 's Deputy Director-General recently stated that "nearly all industrial estates are not up to standards"*, **Bangkok Business**, 4 September 1995, p 3

While securing air pollution control in Thailand requires only straightforward improvement in some substantive legal provisions, better law enforcement and more manpower, combatting deforestation and conservation of biodiversity will prove to be more complicated As pointed out in Chapter 6, forest laws in Thailand have completely failed to halt the rate of deforestation because they fail to take into account the socio-economic causes of the problem Governmental measures which promote large economic plantations, especially the growing of eucalyptus, have brought about further adverse effects on the state of the forest This line of policies, which benefit only particular business interests under the guise of reforestation programmes, need now to be seriously reconsidered The promotional privileges granted to such enterprises and the charging of only nominal fees for such plantations should be withdrawn. Eucalyptus planting, if allowed at all, should be confined to the most degraded forest areas where planting of other trees is not possible. Such plantations should also be strictly supervised so that no encroachment into areas with forest cover (i e cutting down trees in order to clear the areas for plantations, as has often allegedly occurred in the past) is possible

It has been increasingly recognised, especially among academics and environmental NGOs, that forest conservation programmes cannot be successful without participation of the local communities concerned. The environmental benefits of forest conservation are national and global whereas the burdens and costs are borne locally. Evaluation of the costs of conservation should not be confined to forest protection costs in the strict sense, but should include the actual loss of income and benefits which local communities derive from the forest [23] In many cases, the costs to local communities are greater than the governmental budgetary sums allocated to forest protection [24] Thus, unless some kind

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[23] M Kaosa-ard, *Sharing the Benefits and Costs of Forest Conservation*, **TDRI Quarterly Review**, Vol 10, No 4, December 1995, p 11, at p 14

[24] *Ibid* See also M Kaosa-ard et al , **Green Finance : A Case Study of Khao Yai**, TDRI, Bangkok, 1995 which found that the annual cost of protecting Khao Yai National Park, which

of compensation is devised to make up for the benefits lost by local communities, the present forest protection policies, under which large areas are declared reserved or protected forests without regard to existing settlements and uses, are bound to meet with fierce local resistance. The precise forms which this compensation might take will have to be carefully worked out in future studies but it should now be accepted in principle that local communities will have to be compensated for the financial burden forest conservation places upon them Other options must be provided for them in return for their foregoing opportunities to use the forest to support their livelihood Broadly speaking, this means that more national resources must be directed towards rural development to narrow the gaps between the rich and the poor. More financial and technical support must be given to encourage people to engage in more efficient farming rather than the slash and burn practices whereunder farmers constantly move on to seek more productive land deeper into the forest as local soil fertility declines It has often been suggested that were some form of property rights (e g non-transferable user right) over land to be given to farmers, this would encourage them to invest more into the land and lead to more efficient farming methods. While this may be true to a certain extent, it is worth noting that the Government policy, since 1979, of granting a right to villagers to use for agricultural purposes land on which they have settled in the forest reserve areas, has not worked satisfactorily in the past.[25] Another way of creating options is by

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covers 160,000 hectares, is about US$ 32 million, while the net present value of income lost by families in 200 villages around the park was estimated to be US$ 66-132 million

[25] A Kanchanapan and M Kaosa-ard, **The Evolution of Forest Encroachment for Farming : A Case Study of the Upper Northern Region**, Faculty of Social Sciences, Chiang Mai University, February, 1991, at pp 128-136 This policy is the result of a Cabinet Decision on 28 August 1979 The property right granted here is called "Sor Tor Gor" (meaning the right to feed on the land) It allows each household to farm on certain areas of forest reserves to the maximum of 15 rai (2 4 hectares) for a period of 5 years The right is renewable upon conditions that the land is not left idle and it has not been tranferred It can be withdrawn if the conditions are not observed. Although the right is inheritable, farmers who hold this right cannot legally sell it to others. In practice, however, land covered by Sor Tor Gor is speculated in widely at a price much lower than land covered by title deeds In the North, there is a big market for such land for building holiday resorts In Chiang Mai alone, it is found that in 92% of the cases where Sor Tor Gor was withdrawn, this was done for violating the prohibition on transfer, see p 129 It may be argued, however, that since Sor Tor Gor is not accepted by banks or any financial institutions in

providing job opportunities in the off-farm sector so that local communities are less dependent on forest use. All these imply more equitable distribution of resources to alleviate poverty in the rural areas, including economic hardships caused by the need to conserve the forest. These considerations should also be taken into account when allocating international funding (e g. from the GEF) to Thailand and other countries with similar conditions for purposes of conserving the forest and protecting biodiversity

In addition to compensating local communities for conservation of the forest, a current debate in Thailand, which is highly relevant in this context, concerns the involvement of local communities in forest conservation through the concept of establishing community forest. As explained in Chapter 6, this is a concept which allows members of local communities living adjacent to a forest area to control its use. A detailed discussion of the feasibility of this concept is beyond the scope of this study but, as pointed out in Chapter 6, it is clear that the concept probably cannot be applied universally to all communities In principle, however, in communities where sufficiently strong structures exist to control unsustainable use of the forest, a communal right to use the forest in return for their efforts to protect it should be recognised. Such a system, as has been found by some studies, can work to protect the forest more effectively than relying on State machinery which alone has no capacity to halt deforestation in the first place [26] An important component, enabling the system to work, is the existence of some kind of local organization, such as a village committee, sub-district council, water committee or nature conservation group or combinations thereof, which will take the lead and foresee that agreed rules concerning forest use are observed. There is a strong argument at present for the State to enact laws which recognise the authority of such groups in controlling forest use and in taking actions to halt deforestation and encroachment by outsiders. The

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order to secure a loan, farmers holding the right cannot rely on it for purposes of investing in the land in the first place

[26] *Ibid* , pp 142-152 This study surveys 66 community forests ranging from an area of 50 rai (8 hectares) to 1,000 rai (160 hectares) in 66 villages in the upper north of Thailand and found that the system works effectively

concept of community forest is attractive as a way of forest conservation in view of the State's complete failure itself to deal with the problem although the details governing the concept remain to be worked out and its suitability to a particular community will have to be considered on a case by case basis.

Having examined Thailand's laws, institutions and policies relating to protection of the atmosphere and preservation of biodiversity and evaluated their efficiency, it is instructive to examine its performance at the international level in these fields to ascertain what still needs to be done Thailand has ratified most of the major international environmental agreements in the areas of atmospheric protection and nature conservation with the important exceptions of the Ramsar Convention and the CBD. It is now the only ASEAN State not to have ratified the latter. As far as the Montreal Protocol on Substances that Deplete the Ozone Layer is concerned, Thailand is seriously implementing strategies to phase out the use of ODSs by the year 2008, two years before the original scheduled date. This is partly due to the incentive given by the Protocol's Multilateral Fund, but largely to economic necessity. With the complete phase out in the use of ODSs imminent in developed countries, developing countries like Thailand will find it increasingly difficult both to find export markets for their products containing ODSs and to find ODSs as raw materials to supply their industry. It is economically wise therefore to implement phasing out strategies now rather than to expend large sums to restructure their industries in the future

Thailand is also already a party to the FCCC. Since the Convention does not impose onerous obligations on developing countries, it can be anticipated with some certainty that Thailand will be able to comply without difficulty with the reporting obligations required by the Convention However, it would be more meaningful for it to undertake further measures to reduce emission of GHGs, especially CO_2, as to do so would be both in its own and global interests As pointed out in Chapter 4, Thailand is encountering serious air pollution problems especially in the BMA. Problems concerning acid rain are

also emerging and it is quite possible that it may become a regional problem as neighbouring countries are industrializing rapidly. Pressure generated by increasing energy demands and the difficulty of finding new sources of energy amid public opposition to construction of power generating dams will necessitate more efficient use of energy in the industrial, transportation and urban sectors. An indication of this trend is signalled by the adoption of the 1992 Energy Conservation Act to regulate use of energy consumption in large buildings Moreover, as discussed in Chapters 4 and 5, the Government has taken several measures with respect to fuel standards to combat air pollution problems, notably the complete ban on the use of leaded petrol from 1 January 1996. Even these measures will not, however, make a substantial impact on the country's overall energy consumption and emissions of air pollutants which, as pointed out in Chapter 4, will lead to Thailand's doubling its CO_2 emission by the year 2000 and tripling it by 2006 unless effective preventive measures are taken. A number of policy measures, such as switching to low-carbon fuels, were suggested in Chapters 4 and 5 and thus will not be recited here It should be stressed, however, that the most promising tool to induce a decrease in energy consumption seems to be the use of economic instruments as part of the implementation of the PPP, as advocated within the EU (see Chapter 8) Although the principle has been recognised in Thailand's Seventh National Economic and Social Development Plan and advocated by various policy research institutes, especially the TDRI, it has not yet been fully implemented in practice, except partly in the industrial sector where polluters are required to invest in pollution treatment equipment in order to comply with emission standards, or pay charges for central waste water treatment facilities if they choose not to instal their own treatment facilities. Amongst its policy statements addressed to the Thai Parliament on 26 July 1995, the present Thai Government pledged that it would take urgent measures to prevent and solve problems of water, air and noise pollution, as well as pollution by hazardous wastes, through the implementation of the PPP. It remains to be seen how this pledge will actually be carried out as enactment of measures based on the principle will certainly affect various business and industrial interests as well as the general public, and its application will require a great

deal of political courage. An obvious example of such measures would be the levying of pollution charges on industrial plants as well as private households, based on the local environmental assimilative capacity. Thus industrial plants and private households in the urban areas would have to pay more pollution tax than those in the provincial areas Another example would be raising electricity price to reflect the true cost of its generation (e.g. incorporating environmental damage caused by burning of more lignite in power plants) and its scarcity. An introduction of carbon or energy taxes and a system of tradeable emission rights currently operated in the U.S. should also be considered.[27] Although all these measures are desirable from an environmental point of view, they are not easy to adopt even among the OECD member countries which have initiated the principle since the early 70's The recent failure of the EU to introduce an energy tax within the Communities, as outlined in Chapter 8, is a good example of these difficulties. In a country like Thailand where a large number of the people are still poor (and thus would be hardest hit), change of government is frequent and the environmental understanding of politicians is low, the task is even harder. Nevertheless, if it can be shown internationally that developed countries, which at present are the major polluters, are seriously taking measures to reduce consumption and emission, this could provide a good example and political justification for a national government such as that of Thailand to act domestically. As things stand at present, Thailand is likely to join other developing countries in demanding that industrial countries must take substantive measures effectively to reduce emissions before it is asked to take similar actions It is important, therefore, that a Protocol under the FCCC which sets firm targets and timetables for emission reduction of greenhouse gases should be concluded as soon as possible

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[27] A wide range of measures including those mentioned here are now being strongly advocated among leading environmental economists at the latest TDRI Annual Conference in Thailand, see M. Kaosa-ard, **Rules, Instruments and Public Participation in Environmental Conservation**, Conference Report No 2, TDRI, 9-10 December 1995 According to Kaosa-ard, while public participation in environmental decision making has often been stressed, its more crucial element should be that the public, as polluters, should participate in sharing the burden of pollution prevention and treatment costs

With regard to the conservation of biodiversity, Thailand enacted specific legislation to implement CITES in 1992. Problems encountered by it in implementing CITES are typical of those in other developing countries, namely shortage of staff and qualified personnel to check and identify species regulated by the Convention. Problems concerning illegal trading of wild species, which contributes to loss of biodiversity, still persist but the situation has improved compared to that of before 1992 when CITES regulated species were openly displayed and sold More effective enforcement of the law, rather than improving the substantive legal provisions, is the key to solving the problems of illegal trading. Like other countries, including developed ones, the fact that the law permits trading of wild species bred in captivity is a loophole which presents further problems for law enforcement and provides opportunities for corruption as it is always difficult to certify that the species, especially animals, were actually bred in captivity or not caught in the wild. Although it is now scientifically possible to prove this by DNA testing, as is done in some developed countries, such techniques are generally beyond the means and capability of developing countries at present. Given that this loophole is widely abused by traders in various countries, CITES parties should consider amending, at least so far as wild animals are concerned, the provision providing for this exception It is recommended that breeding of wild animals, especially Appendix I species, should be allowed for conservation purposes only.

Two other Conventions in which Thailand should participate more actively are the World Heritage Convention and the Ramsar Convention With respect to the former, Thailand should propose more natural sites for entry on the World Heritage List. While financial benefits from listing a site on the List are not substantial, such listing does lead to more public attention being paid to the site and hence better protection. At the very least, it would ensure that the site would not be used for any public or private development projects Listing a site would also promote more awareness of its environmental importance. In addition, as suggested earlier, Thailand should more actively seek

financial and other assistance under the Convention, as it is entitled to do as a Party, to ensure the conservation of the listed sites.

Thailand has not yet ratified the Ramsar Convention although there is every reason why it should do so to enhance and secure assistance in protecting its wetlands. However, it has formed a National Wetland Committee and has begun work on the management plans for three possible Ramsar sites to be designated upon its joining the Convention [28] It is, therefore, just a matter of time before Thailand ratifies it. However, it is notable that interest or knowledge about the Convention, or even concerning the environmental values of wetlands, is still mainly confined to a concerned group of academics and government officials working in the OEPP, whose direct responsibility includes supporting Thailand's participation in international environmental protection. Much more needs to be done to promote better understanding among the public of the values of wetlands and the benefits of joining the Convention As in the case of the World Heritage Convention, little financial benefits accrues from becoming a party to the Convention, but listing sites on the Ramsar list will direct national attention to the protection of the particular site and prevent it from improper land use.

More problematic and uncertain is Thailand's present position towards the CBD. Although a number of relevant government Departments, notably MOSTE's environmental departments, as well as a few academics who interpret the Convention texts positively, have recommended joining the Convention for some time, ratification has been delayed until now by negative, and, in the writer's view, possibly misconceived, attitudes towards the Convention and interpretation of its terms Opposition has come largely from a group of NGOs which consider ambiguity in the Convention's provisions requiring that countries which host genetic resources allow appropriate access and those concerning the need to pay due regard to intellectual property rights to be a threat to

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[28] Information supplied by the Ramsar Convention Bureau, 22 November 1995

Thailand's interests and sovereign rights. Their fear is reinforced by the argument that by allowing foreign companies access to the country's genetic resources, indigenous knowledge of the medicinal properties of certain genetic resources would also be acquired by developed States free of charge while the products developed by the latter from such resources, on the basis of such knowledge, would be patented under the Western system of intellectual property law and then returned to be sold at high price in Thailand and other developing countries.[29] Although, as discussed in Chapter 3, the Convention contains several provisions which should improve the position of developing countries, such as recognition of their sovereign right over genetic resources, requirement that access be based on "mutually agreed terms" and "prior informed consent", and the requirement that developed States provide financial resources and technology for purposes of conservation, these beneficial aspects have not, as they should have been, been properly brought out in the debate . In this respect, the government Departments concerned have failed to promote sufficient understanding to support their proposal that Thailand should ratify the Convention. At a recent Conference held by Mahidol University (which is at the time of writing running several projects on the study of Thailand's biodiversity) on 16-17 October 1995, it was recommended by the participants, who consisted mostly of academics and NGOs, that Thailand should postpone ratification for the time being because the case for ratification has not yet been made out convincingly. Among the conclusions made by Conference, it was stressed that Thailand needed to be better prepared in terms of its internal laws and policies as well as the knowledge of its own genetic resources In addition, the Government should consider enacting a law to provide protection for indigenous knowledge concerning biological

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[29] This fear can be illustrated by the recent collapse of the so-called "Riche Monde initiative" even before the project started This is a project whereby Riche Monde (Thailand), a well-known distributor of imported whiskies and brandies, would finance a joint research project between the Foundation of Ethnobiology registered in UK and the Biology Department of Chiang Mai University into traditional medicines derived from plants and herbs of the Saka Karen tribes in five remote villages in Northern Thailand Suspicion aroused by the media and some local NGOs about the project led to Riche Monde's cancelling the entire project despite its claim that its intentions were philanthropic, for more details, see Kaosa-ard, *Sharing the Benefits and Costs of Forest Conservation*, *supra*, note 23, pp 15-17

resources and their uses. Interestingly, it was pointed out by those opposing ratification that Thailand is financially capable of supporting its own conservation programmes without relying on the external financial assistance promised by the Convention Although this is a curious position to take, it can be viewed positively as demonstrating the NGOs' strong interests in the conservation of biodiversity without waiting for financial resources to be provided by developed countries. Their forces can be rallied to further effective implementation of the Convention in Thailand provided that a common understanding of the Convention can be reached.

Amid the controversy concerning ratification, the OEPP has, at the time of writing, prepared a draft regulation on access to the country's genetic resources. Although this draft will probably be modified substantially before it is finally approved, it gives an insight to the kind of access agreement that developing countries would expect to see Hence it is provisionally and informally translated by the writer and included as Appendix III of this thesis. In essence, a National Centre for Research and Development of Biological Diversity will be established to act as a clearing house between any foreign entity seeking access to Thai genetic resources and the holders of such resources, which could be a Government Department (e g. the Royal Forest Department or the Fishery Department if it concerns protected areas within their responsibility, or the Department of Agricultural Extension if it concerns species bred in captivity outside protected areas) or a private person A National Central Committee on Research and Development of Biological Diversity, consisting of representatives from government agencies concerned with granting permission, control of access and export of biological resources, will be set up to consider applications for access and export of such resources If an application is approved, the Centre will proceed to negotiate an access agreement with the applicant and issue an access permit in the event that such an agreement is successfully concluded The permit will be for a maximum period of one year It can be renewed, suspended or withdrawn if conditions governing access are violated. Among the conditions governing access are that the applicant must include a Thai researcher or a Thai representative in his

research, only species and families thereof which are specified in the permit may be collected, due care must be taken not to cause damage or disturbance to the habitat and other species situated nearby; and in the case where a rare or endangered species is found, the Centre must be accordingly notified Where a species will be taken for research, duplicate specimen, details of its genetic information and photographs or slides of the specimen must be deposited with the Centre or the counterpart Thai research institute or a Thai museum. According to the guidelines for negotiating an access agreement, royalties in the range of 15-30% of the income from sales of products derived from the genetic resources concerned are payable to the Centre.

Although genetic resources can be of commercial value to both agricultural and pharmaceutical industries, this draft regulation seems to aim primarily at the latter. The rate of royalty specified in the guidelines indicates a fairly high expectation of the income that might be generated through biodiversity prospecting. There is no doubt that the CBD and the Merck-INBio Agreement have created a significant level of awareness of the problems and potential benefits deriving from biodiversity prospecting among developing countries, including in Thailand, which has not even ratified the Convention No one knows the exact potential of financial and other returns that developing countries may receive from such activities but according to some estimates, the total financial returns for developing countries are said to amount to less than US$ 100 million annually[30] because of the low likelihood of discovering a valuable compound for the pharmaceutical industry. It can be argued that the rate of royalties specified seems rather ambitious given that the value of the resource would depend to a large extent on the information about its potential use and the feasibility of success, given the uncertainties of the research involved, often over a number of years, and the stringent and expensive tests

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30 W. Reid et al , *A New Lease on Life*, in W. Reid et al, **Biodiversity Prospecting : Using Genetic Resources for Sustainable Development**, World Resources Institute, U.S.A , 1993, p 16, citing J H. Barton and E. Christensen, *Diversity Compensation Systems : Ways to Compensate Developing Nations for Providing Genetic Materials*, in J R Kloppenburg, Jr (ed.), **Seeds and Sovereignty**, Duke University Press, Durham, N C , 1988, pp 339-355.

required by the authorities in developed States before new products can be launched on the commercial markets.[31] This information would be made possible through research on and development of biological resources carried out by scientists and taxonomists, a capability which most developing countries, including Thailand, still lack. However, the most serious criticism which can be made of this draft is the absence of a mechanism or guarantee that part of the income accrued from biodiversity prospecting will be used for the purpose of conservation Neither is the need for the participation of local communities recognised in the negotiation of an access agreement. As collection of genetic materials is usually based on some kind of indigenous knowledge of their medicinal properties (i e. it makes little sense to collect the resources randomly without some pre-existing knowledge about them), some guarantee should be given that part of the benefits from biodiversity prospecting is returned to the local communities as an economic incentive for them to participate in conservation efforts. Consciousness raising among them of the value of preserving diversity is also needed to strengthen their bargaining position Unless these elements are recognised in regulation of access to genetic resources, it is hard to see how the opportunities in biodiversity prospecting provided by the Convention can be mobilised for the benefits of biodiversity conservation As observed by Reid, "*For those countries that have shown a commitment to biodiversity conservation and the development needs of rural communities, biodiversity-prospecting intermediaries can be a valuable element of biodiversity-conservation policies. Without such a national commitment, biodiversity prospecting may be nothing more than the newest unsustainable resource-commercialization venture.*"[32]

Lastly, we should examine the prospects for using a regional approach, as advocated in Agenda 21, to advance sustainable development among developing countries. ASEAN,

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[31] See Reid, *ibid*, p 34, it is stated that in the pharmaceutical industry, the common royalties received are 1-6% for unscreened chemical samples, 5-10% for material backed by pre-clinical information on its medical activity, and 10-15% for fractionated and identified material with efficacy data

[32] Reid et al, *A New Lease on Life*, *supra*, note 30, p 30

which comprises nearly all countries in Southeast Asia, possesses the potential to exercise an effective role in regional environmental management. This potential is further enhanced by the fact that the other remaining Southeast Asian countries which have not joined the organization, namely Cambodia, Laos and Myanmar, now participate in ASEAN meetings, including the latest ASEAN Summit held in Bangkok, as observers Each of these three countries, especially Myanmar, has expressed its intention to join ASEAN soon. This means that ASEAN will probably embrace all Southeast Asian countries by the turn of the century. However, as discussed in Chapter 8, it cannot be said that ASEAN is developing in a cohesive manner, as has the EU. It has not even succeeded in setting up the necessary basic infrastructure to support its increasing role although the organization has now been in existence for almost thirty years. This is primarily due to the lack of resources committed by its participants for purposes of institution building as ASEAN members are all, with the exception of Singapore, developing countries. It is therefore hard for it to attain the same infrastructure level as the EU which consists largely of developed countries. Another explanation is that there has not been significant political commitment among ASEAN members to delegation of their powers to ASEAN in order to enable it to carry out its tasks more meaningfully Even the organization's achievement in building economic integration has, until recently, been minimal As we have seen in Chapter 7, ASEAN's action in the area of environmental protection has been very much confined to use of "soft law" instruments, such as declarations and resolutions, and execution of a large number of projects under the ASEP programmes. All these have had little impact at a regional level and if it can be said that ASEAN countries have made some progress in environmental protection, this is due largely, probably wholly, to individual countries' own initiatives. The 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources, which is the only "hard law" instrument in the region, and which has been very much commended, has not entered into force and there is little sign that it will do so in the near future. Indeed, there would probably be little difference from the present situation were the Agreement to enter into force, given the lack of effective enforcement or compliance mechanism, the

difficulty in determining non-performance, and the unlikelihood that ASEAN member countries would confront each other to complain of breaches. The ASEAN Environment Year, declared for 1995, passed quietly, known of only by a few concerned people. Economic issues dominated the 5th ASEAN Summit held in Bangkok during 14-15 December 1995 with no mention being made of the environment.[33] As a result, the Bangkok Declaration, signed at the end of the Summit, hardly refers to or impinges on environmental issues.[34] In the field of functional cooperation, which contains 17 paragraphs, only 2 paragraphs can be said to be remotely related to protection of the environment,[35] and those only indirectly.

Therefore, for ASEAN to become an important vehicle for promotion of sustainable development in the region, more international funding will need to be allocated to it to stimulate its capacity for taking a more active role in environmental management. More importantly, ASEAN members themselves must first conceive the issues as being of regional significance, an element which is still regrettably lacking. One can only conclude that more political commitment among ASEAN members is needed to enhance the organization's potential role in the field of sustainable development. Mobilisation of more international funding, such as from the GEF, the EU, the UNDP, the WWF or other sources, including the Asian Development Bank (ADB), will certainly help to bring about some action.[36] Although it is desirable that all regional groupings should engage in

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33 The main issue at the Summit concerns the acceleration of AFTA before the target date of 2003

34 See *Bangkok Summit Declaration of 1995*, reprinted in **the Sunday Post**, Bangkok, 17 December 1995, p 20

35 These are that "*ASEAN shall advance the economic prosperity and social well-being of its people in a sustainable manner, in partnership with the private sector, for the benefit of future generations and in the interest of ensuring a balanced ecosystem*" and that "*ASEAN shall engage the support of the public, private, international and national organizations and agencies in community building through appropriate educational processes, in recognition of the crucial role of community education in sustainable development*".

36 For the development and the growing variety of environmental trust funds, see P H Sand, *Trusts for the Earth : New Financial Mechanism for International Environmental Protection*, The Josephine Onoh Memorial Lecture, 21 February 1994, University of Hull Press, 1994 Also, P H Sand, *Trusts for the Earth · New International Financial Mechanisms for Sustainable*

environmental regulation, as does the EU, it is highly questionable whether any such grouping, especially one consisting of developing countries like ASEAN, will ever be able to attain the degree of integration, and hence the degree of authority, that the EU has done, despite its present critics and limitations.

This thesis has sought to demonstrate the difficulties of implementing the emerging concept of sustainable development in developing countries such as Thailand. The future of the world depends on the successful implementation of the concept both in developed and developing countries. While there seems to be a greater degree of environmental awareness in the developed world, cooperation and economic sacrifice have not been as forthcoming as they should, as illustrated by the problems associated with setting targets and timetables for the reduction of GHGs' emission. In addition, the reluctance of developed countries to commit resources and technology to assist developing countries, as required by the recent relevant treaties, is bound to affect the ability and the willingness of the latter to cooperate and to implement the concept If developed countries find it hard to carry out their obligations, it is even more difficult for developing countries to compromise their economic interests for the sake of the environment. While there is evidence that a number of legal and policy measures are being taken for environmental protection and the level of environmental awareness is rising in Thailand, the question is whether enough has been done in order to avoid the mistakes committed by developed countries in their development process Unless the momentum created by UNCED continues to be maintained and both developed and developing countries consider implementing their obligations, including those proposed in Agenda 21, seriously, there is a real danger that the global environment will not be sustainable to the detriment of future generations There is an urgent need to give more substantive content to the various principles and concepts, referred to throughout this thesis, which aim to provide

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Development, in Lang, *supra*, note 1, pp 167-184 For an increasing awareness of the ADB of the need to conduct environmental analysis of development projects, see *Regional Development Bank · Asian Development Bank* 3 **YIEL** (1992) p 538

guidelines to achievement of sustainable development through their applications at all levels. This can be developed through state practice and international legal processes, including revision of environmental treaties concluded before UNCED in order to take account of the sustainable development concept.[37] It is necessary that these processes be based on the principle of "common but differentiated responsibilities" so that both developed and developing countries can truly be "partners" in the achievement of sustainable development.

[37] As observed by Birnie in relation to one of the most important environmental treaties that were CITES to be renegotiated today, various principles enunciated in the Rio Declaration would be included in its Preamble, P Birnie, *The Case of the Convention on Trade in Endangered Species*, paper presented at the symposium on "Enforcing Environmental Standards · Economic Mechanisms As Viable Means ?", Heidelberg, 5-7 July, 1995, p 30

Appendix 1

The Conservation and Protection of Wild Animals Act *
B.E. 2535 (1992)

Bhumibol Adulyadej, Rex.
Given on the 19th Day of February B.E. 2535
In the 47th Year of the Present Reign

His Majesty King Bhumibol Adulyadej is graciously pleased to proclaim that :

Whereas it is deemed expedient to improve the law on conservation and protection of wild animals

Be it, therefore, enacted by the King, by and with the advice and consent of the National Legislative Assembly, acting as Parliament, as follows :

Section 1 This Act shall be called "The Conservation and Protection of Wild Animals Act, B E. 2535.

Section 2 This Act shall come into force on the next day following its publication in the Royal Government Gazette.

Section 3 The following legislation shall be repealed :

(1) The Conservation and Protection of Wild Animals Act, B.E 2503 (1960)

(2) The Revolutionary Council Notification No.28, 18 October B E. 2515 (1972).

Section 4 In this Act,

"Wild animals" means all kind of animals, whether they are terrestrial or aquatic, winged animals, and insects which by their nature originate and live in the forest or in water, including eggs of all these wild animals, but excluding beasts of burden which have been duly registered in accordance with the law on beasts of burdens and animals which are reproduced by them

"Reserved wild animals" means rare wild animals in the list as annexed to this Act, and as may be subsequently so specified in a Royal Decree .

"Protected wild animals" means wild animals specified by Ministerial Regulations to be protected wild animals.

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* This legislation has been informally translated by the writer of this thesis The writer wishes to thank Professor Patricia Birnie for improving use of English in some parts of the translation

"Hunting" means to collect, to trap, to catch, to shoot, to kill, or to endanger by any other means, unowned and free wild animals, including chasing, rounding up, calling or attracting wild animals for such purposes

"Carcases of wild animals" means the body or parts of dead wild animals or their meat, whether these are grilled, roasted, smoked, dried, fermented or preserved in any other ways to prevent decay, and whether these have been eviscerated, separated, or still in the body of wild animals, including horns, skins, bones, teeth, tusks, fangs, rhino horns, feathers, scales, nails, shells, or various parts of wild animals which have been separated from their bodies whether they are still alive or dead

"Breeding" means propagation of kept wild animals by means of breeding, including propagation by artificial breeding or by transplanting embryos.

"Trading" means to purchase, to sell, to exchange, to dispense, to distribute or to transfer ownership for commercial purposes, including to display for sale.

"Import" means to bring or to order into the Kingdom.

"Export" means to take or to send outside the Kingdom

"Transit" means to take or to send through the Kingdom.

"Wild animal checkpoints" means checkpoints for wild animals and carcases of wild animals

"Public Zoos" means places or areas which collect wild animals for recreational, educational, study and research purposes for the public, and which serve as breeding places for wild animals

"Officials" means persons appointed by the Minister to act under this Act.

"Director-General" means the Director-General of the Royal Forest Department or the Fisheries Department only sofar as this relates to aquatic species.

"The Committee" means the National Committee for the Conservation and Protection of Wild Animals

"Minister" means the Minister responsible for the functioning of this Act.

Section 5 The Minister of Agriculture and Co-operatives shall be the Minister responsible for the functioning of this Act and shall have power to appoint officials, to issue Ministerial Regulations prescribing fees not exceeding the amount specified in the Annex of this Act, to reduce or to exempt from fees, and to determine other matters for the functioning of this Act.

A Ministerial Regulation shall come into force after its publication in the Royal Government Gazette

Part 1
General Provisions

Section 6 The classification of wild animals to be protected shall be done by a Ministerial Regulation and with approval of the Committee

A Ministerial Regulation issued under paragraph 1 shall come into force on the date as provided in it, but it shall not come into force before the elapse of a period of sixty days from the date of its publication in the Royal Government Gazette.

Section 7 Any person who hunts wild animals in violation of this Act out of necessity and under the following conditions shall be exempted from penalties :

(1) to defend himself or herself or any other person from danger, or to preserve his or her or another person's property.

(2) the hunting has been reasonable, and

(3) in the case where the hunted animals are reserved or protected wild animals, the person concerned does not move the body of the animals or their carcases, and has duly notified the officials concerned without delay of the reasons for which the animals have been hunted

Wild animals which have been hunted and their carcases shall become state property and shall be dealt with by the Royal Forest Department, or the Fisheries Department as the case may be, in accordance with regulations laid down by the Director-General with approval of the Committee.

Section 8 In considering application for a licence under this Act, the person authorised to issue a licence shall consider and notify the outcome of the application to an applicant within sixty days from the date on which the application was received If an applicant is not notified of the outcome within the specified period, it shall be deemed that the person authorised to give permission has given permission and a licence must be issued to the applicant

Except where it is otherwise provided in this Act, a licence or a certificate issued under this Act shall be valid for the period as specified in the licence If a licensee wishes to renew his or her licence, he or she must submit a renewal application before the licence expires. After a renewal application has been submitted, the licensee may continue the licensed activities until the renewal application is refused

Renewal of a licence, transfer of a licence or certificate, issue of a provisional licence or certificate under this Act shall be governed by the regulations, procedure and conditions laid down in a Ministerial Regulation.

Part 2
The National Committee for the Conservation and Protection of Wild Animals

Section 9 A Committee called "the National Committee for the Conservation and Protection of Wild Animals" is hereby established. It shall be composed of the Minister of Agriculture and Co-operatives as chairman; the Permanent Secretaries of the Ministry of Agriculture and Co-operatives, the Ministry of Interior, and the Ministry of Foreign Affairs, the Director-Generals of the Department of Local Administration, the Department of Land, the Department of Fisheries, the Department of Customs, and the Department of International Trade; as members *ex officio*, and at least five but no more than eleven other expert members appointed by the Cabinet The Director-General of the Royal Forest Department shall be a member of and the Secretary of the Committee

At least half of the expert members appointed under paragraph 1 shall be selected from representatives of associations or foundations which are concerned with conservation of wild animals.

Section 10 Members appointed by the Cabinet shall serve for a term of two years Members who have completed their term may be reappointed

Section 11 Apart from being discharged from their membership according to their term under Section 10, a committee member appointed by the Cabinet shall be discharged in the following events :

(1) death;

(2) resignation,

(3) discharge by a decision of the Cabinet,

(4) incompetence or quasi-incompetence by a court order,

(5) sentencing to imprisonment by a final court judgment, except where the offence is found to have been committed through negligence or is a petty offence

In the event that a member is discharged before the completion of his or her term, the Cabinet may appoint another person to replace that member. The newly appointed member shall have a term equivalent to the remaining term of the member whom he or she replaces.

In the event that the Cabinet appoints additional members during the term of existing appointed members, the additional members shall serve for a period equivalent to the remaining term of the previously appointed members

Section 12 At a committee meeting, if the chairman is absent from the meeting or is not at the meeting, the committee shall elect a member to chair the meeting

Decisions taken at a meeting shall be taken by a majority vote.

Each committee member shall have one vote. If the votes are equal, the chairman shall exercise his right to cast an additional decisive vote.

Section 13 A committee meeting shall require the attendance of at least half of its members to constitute a quorum

Section 14 The committee may appoint sub-committees to consider or to perform particular functions as assigned by the committee

Section 15 The committee shall have the following powers and duties :

(1) to approve designation of wild animal species conservation zones under Section 33, non-hunting areas and types or classes of wild animals whose hunting is prohibited in those areas under Section 42;

(2) to monitor compliance with Section 35,

(3) to determine actions which should be taken for the purpose of maintaining wild animal species conservation zones and non-hunting areas;

(4) to approve enactment of Royal Decrees, Ministerial Regulations, and regulations necessary for the functioning of this Act.

(5) to stipulate regulations governing the supervision and monitoring of the implementation of this Act.

(6) to perform any other functions required by law as being the duties of the committee

Part 3
Hunting, Breeding, Possession and Trading of Wild Animals, Carcases of Wild Animals and Products Derived from Carcases of Wild Animals

Section 16 It is prohibited for any person to hunt, or attempt to hunt reserved wild animals or protected wild animals, except when this is done by governmental authorities which are exempted under Section 26.

Section 17 The Minister, with the approval of the Committee shall have the power to determine in a Ministerial Regulation the types of protected wild animals which can be bred.

Section 18 It is prohibited for any person to breed reserved or protected wild animals, except

(1) breeding of protected wild animals of the types specified in accordance with Section 17 with a licence issued by the Director-General,

(2) breeding of reserved or protected wild animals by a person licensed to establish or to run a public zoo enterprise under Section 29, who has also been licensed by the Director-General to breed reserved or protected wild animals in that person's possession for the purpose of pursuing his or her public zoo enterprise.

Application for and granting of a licence to breed animals under paragraph 1, and acquisition of protected wild animals for breeding purposes by licensees under paragraph 1 shall be governed by regulations, procedure, and conditions as laid down in a Ministerial Regulation. A licensee shall follow the provisions of the Ministerial Regulations concerned and the conditions as stipulated in the licence.

A licence issued under paragraphs 1 and 2 shall expire when the licensee notifies the Director-General of the termination of his or her licensed breeding activities in accordance with the procedure specified by a Ministerial Regulation

Section 19 It is prohibited for any person to have in his or her possession reserved wild animals, protected wild animals, or their carcases, except where these are protected wild animals of the types specified in accordance with Section 17 and which have been obtained through breeding or carcases of such wild animals. Such possession has to be licensed by the Director-General and a licensee has to follow the provisions in the Ministerial Regulations concerned and the conditions as stipulated in the licence.

Application for and granting of a licence shall be governed by regulations, procedure and conditions as provided in a Ministerial Regulation.

The provisions in paragraphs 1 and 2 shall not apply to the following :

(1) possession of protected wild animals by breeding licensees under Section 18 (1) for the purpose of breeding or possession of such wild animals which have been obtained through breeding or their carcases;

(2) possession of reserved wild animals, protected wild animals, and carcases of such wild animals for the purpose of conducting a public zoo enterprise of a person licensed to establish and pursue a public zoo enterprise under Section 29, provided that the animals and their carcases are displayed in the zoo

Section 20 It is prohibited for any person to trade reserved wild animals, protected wild animals, their carcases, and products derived therefrom, except where the trade concerns protected wild animals of the types specified in accordance with Section 17 and which have been acquired through breeding, their carcases or products derived therefrom. A licence from the Director-General shall be required for such trading

Application for and granting of a licence shall be governed by regulations, procedure and conditions as laid down in a Ministerial Regulation.

Section 21 It is prohibited for any person to collect, to endanger, or to possess nests of reserved or protected wild animals.

The provision in paragraph 1 shall not apply to collection of swallows' nests under the law governing duties levied on swallows' nests and to any person acting under a licensee's authority, but this shall be in accordance with regulations laid down by the Minister and published in the Royal Government Gazette.

Section 22 It is prohibited for any person to shoot wild animals during the period between sunset and sunrise

Part 4
Import, Export, Transit and Movement of Wild Animals and Wild Animal Checkpoints

Section 23 Subject to the provisions of Section 24, it is prohibited for any person to import or export wild animals, or carcases of wild animals of the types stipulated by a Ministerial Notification, or to bring in transit reserved or protected wild animals or their carcases without a licence issued by the Director-General.

Import or export of reserved wild animals, protected wild animals, or their carcases is prohibited except where it is the import or export of protected wild animals acquired through breeding in accordance with Section 18 (1) or their carcases and with a licence issued by the Director-General

Application for and granting of a licence under paragraphs 1 and 2 shall be governed by regulations, procedures and conditions as laid down by a Ministerial Notification.

Section 24 Import, export or transit of wild animals or their carcases of the types requiring a licence or an import, export or transit certificate according to the International Convention on trading of wild animals and their carcases shall require a licence or a certificate issued by the Director-General.

Section 25 Movement of protected wild animals or their carcases for trading purposes by licensees under Section 20 shall require a licence issued by the Director-General

Application for and granting of a licence shall be governed by regulations, procedures, and conditions as laid down in a Ministerial Notification.

Section 26 Provisions in Sections 16, 18, 19, 21 and 23 do not apply to activities for the purposes of exploration, education and academic research, protection of wild animals, breeding of wild animals or running of a public zoo enterprise, which are conducted by governmental agencies with written permission from the Director-General and in accordance with regulations laid down by the Minister with the approval of the Committee.

In the event when the activities conducted under paragraph 1 are conducted for the purpose of breeding by licensees under Section 18 or for the running of a public zoo enterprise by licensees under Section 29, collection and payment of expenses, service fees or compensation and costs of wild animals shall be in accordance with regulations as laid down by the Minister with the approval of the Committee

Section 27 The Minister shall have power to designate checkpoints for wild animals and the areas covered by such checkpoints by a Notification published in the Royal Government Gazette.

Section 28 Any person who moves reserved or protected wild animals or their carcases through a wild animal checkpoint shall inform the official at such checkpoint in writing through a standard form designated by the Director-General, together with a licence for movement of the items for the purposes of trading , import, export or transit as the case may be Movement of such items are permitted after the official concerned has examined the documents and issued a written permission.

Part 5
Public Zoos

Section 29 Any person wishing to establish and to run a public zoo enterprise shall acquire a licence from the Director-General

The licence in paragraph 1 shall expire when the licensee gives notice that the enterprise has ended under Section 32

Application for and granting of a licence shall be governed by regulations, procedures and condition laid down in a Ministerial Notification

In conducting activities in a public zoo enterprise, a licensee shall follow the regulations as provided in Ministerial Notifications and conditions stipulated in the licence

Section 30 After a licence has been issued, the licensee shall inform the official concerned of the types and quantity of reserved or protected wild animals or their carcases in his or her possession, together with evidence concerning their acquisition so that the official can examine the matter and record the details accordingly.

The licensee shall arrange for reserved or protected wild animals or their carcases in his or her possession to inhabit or to be displayed in the area of the established zoo and shall inform the officials concerned without delay each time that such animals or their carcases increase or decrease in number

The notification under paragraphs 1 and 2 shall be governed by the procedure and time limit specified in a Ministerial Notification.

Section 31 When it appears that the conditions in a public zoo area or the areas used for keeping animals are such as to contravene the regulations, conditions or provisions as stipulated in a Ministerial Notification issued under Section 29, or where conditions have arisen in such a way that it may endanger the public who have entered the zoo or may create hazard or suffering to wild animals in the zoo, the Director-General shall have power to issue a written order to the licensee to rectify the situation

In the event that the licensee fails to proceed according to that order, the officials concerned shall have power to take rectifying measures themselves and to demand reimbursement from the licensee for expenses which have been incurred.

Section 32 Any licensee permitted to establish and run a public zoo enterprise under Section 29 who wishes to terminate his or her enterprise shall give prior written notification to the Director-General and shall proceed to sell reserved or protected wild animals or their carcases in his or her possession to other Section 29 licensees, or to sell protected wild animals of the types specified under Section 17 or their carcases to breeding licensees under Section 18 (1) within one hundred and eighty days from the date of the notification to terminate the enterprise to the Director-General.

If, after one hundred and eighty days as specified in paragraph 1, there still remain unsold reserved or protected wild animals or their carcases, these shall become state property The licensee shall deliver such animals and their carcases to the Royal Forest Department, or the Department of Fisheries as the case may be, so that they can be

handled according to regulations laid down by the Director-General with approval of the Committee.

Part 6
Non-Hunting Zones and Areas

Section 33 When the Cabinet deems it expedient to designate a particular area as a safe habitat for wild animals in order to conserve wild animal species, it shall issue a Royal Decree for such purpose with a map prescribing the boundaries for such area annexed to it. Such an area shall be termed a "wild animal species conservation zone". The land which is designated as a wild animal species conservation zone shall not be land under ownership or occupational rights of any person, which is not a government agency under the land law code.

Section 34 An expansion or withdrawal of a wild animal species conservation zone, whether in whole or in part, shall be done by a Royal Decree. In the case where the designation is not withdrawn in whole, there shall be a map indicating the changed boundaries of the zone concerned annexed to the Royal Decree.

Section 35 The officials concerned shall arrange for posts and placards or other signs to be established as appropriate in order to indicate the boundaries of a wild animal species conservation zone and to enable the public to note the location of such a zone.

Section 36 In a wild animal conservation zone, it is prohibited for any person to hunt wild animals, whether they are reserved or protected wild animals or not, or to collect or endanger nests of wild animals, except when this is done for the purposes of education or academic research, and with a written permission from the Director-General issued with the approval of the Committee.

Section 37 Except for officials concerned or any other officials who need to enter a wild animal species conservation zone to perform their official duties, it is prohibited for any person to enter a wild animal species conservation zone without permission from the officials concerned

Persons permitted to enter such a zone shall comply with the terms and conditions stipulated in a Ministerial Notification

Section 38 In a wild animal species conservation zone, it is prohibited for any person to hold or occupy land, or to cultivate or construct any object, or to cut, to fell, to

clear or to burn trees or other plant life, or to excavate for minerals, soil, or stone, or to graze livestock, or to free animals or wild animals, or to change watercourse directions, or to cause water in creeks or swamps to overflow, or become dry, poisonous, or hazardous to wild animals.

In the event that it is necessary to act in order to protect, to care for, or to maintain a wild animal species conservation zone; to pursue activities for breeding, educational or academic research purposes; to facilitate studies or provision of accommodation; or to facilitate safety measures or dissemination of information to the public, the Director-General shall have power to issue a written order to the officials concerned or to the officials of the Royal Forest Department, or of the Department of Fisheries, as the case may be, authorising them to perform certain acts in a wild animal conservation zone. Such acts shall comply with regulations stipulated by the Director-General with approval of the Committee.

Section 39 The management of trees or other plant life which has been cut or cleared by officials established under Section 38 (2) shall be in accordance with regulations laid down by the Director-General with approval of the Committee.

Section 40 The officials on duty in a wild animal species conservation zone shall have power to order any person contravening Section 38 (1) to leave the zone or to omit from committing any act in violation of Section 38 (1) in the zone.

Section 41 It is prohibited for any person to hunt wild animals, whether they are reserved or protected wild animals or not, or to collect or to endanger nests of wild animals in temple areas or other areas which are designated to the public for religious functions

Section 42 The Minister, with approval of the Committee, may designate an area which is used for governmental service, or for public utilities or for common use by the public to be a non-hunting area for particular species or types of wild animals as notified in the Royal Government Gazette.

When there is a Ministerial Notification declaring a non-hunting area of particular species or types of wild animals, it is prohibited for any person to commit the following acts :

(1) to hunt those particular species or types of wild animals,

(2) to collect or to endanger nests of those wild animals the hunting of which is prohibited;

(3) to occupy land, or to cut, to fell, to clear and to destroy trees or other plant life, or to excavate for minerals, soil, stone, or to divert watercourses, or to cause water in streams, creeks and swamps to overflow, become dry, poisonous or hazardous to wild animals, except when the particular act is committed with a written permission from the Director-General or the Director-General declares such permission on particular occasions with respect to particular non-hunting areas.

In the event that it is necessary for officials concerned to perform their official functions authorised by law for purposes of education or academic research in a non-hunting area, the officials shall comply with the regulations laid down by the Director-General with the approval of the Committee

Part 7
Officials

Section 43 When it appears that a licensee contravenes or violates this Act, any Ministerial Regulations, terms and conditions as stipulated in the licence, or fails to follow an order issued by the officials concerned in accordance with this Act, the Director-General shall have power to suspend the licence which has been issued under this Act for a period not exceeding ninety days, or if the Minister deems it appropriate and with approval of the Committee, the Minister may withdraw the licence

In the event that a licence is withdrawn, if the licensee concerned has reserved or protected wild animals or their carcases in his or her possession, the licensee shall proceed to sell those items within thirty days from the date on which he or she is notified of the withdrawal of the licence. If, after that period, there are any items which remain unsold, they shall be deemed as state property and the Royal Forest Department, or the Fisheries Department as the case may be, shall deal with those items in accordance with regulations as laid down by the Director-General with approval of the Committee

Section 44 In the case where any person wishes to request officials under this Act to perform their duties outside official working hours or outside their office, whether within the country or abroad, such person shall submit a request to the officials concerned, and he or she shall be responsible for the living allowance of such officials according to the official rate, and they shall pay for necessary travelling expenses of the officials as actually incurred

Submission of a request and payment of living allowance and travelling expenses shall be governed by regulations, procedure and conditions as provided in a Ministerial Regulation.

Section 45 In executing an arrest and controlling of offenders under this Act, the officials concerned shall be deemed to be administrative or police officials according to the Criminal Procedure Code.

Section 46 When it is deemed expedient to make the public pay for service fees or charges arising from the work of officials who provide a service or assistance in a wild animal species conservation zone or a non-hunting area, the Director-General, with the approval of the Committee, shall have power to determine the rate and to lay down regulations governing the collecting of such service fees or charges

Money collected under paragraph 1 and money derived from donations for the purpose of maintaining a wild animal species conservation zone or non-hunting area shall be exempted from taxation, and such money shall be expended on the maintenance of wild animal species conservation zones or non-hunting areas in accordance with regulations laid down by the Minister with the approval of the Committee

Part 8
Penalties

Section 47 Any person who violates Sections 16, 19, 20 (1) or 23 (1) shall be liable to imprisonment for a period not exceeding four years, or a fine not exceeding forty thousand baht, or both.

Section 48 Any person who violates Sections 18 or 23 (2) or fails to comply with Section 29 is liable to imprisonment for a period not exceeding three years or a fine not exceeding thirty thousand baht, or both.

Section 49 Any person who has in his or her possession protected wild animals acquired through breeding or their carcases without a licence according to Section 19 shall be liable to imprisonment for a period not exceeding one year, or a fine not exceeding ten thousand baht, or both

Section 50 Any person who trades protected wild animals acquired through breeding or their carcases or products made from their carcases without a licence according to Section 20 shall be liable to imprisonment for a period not exceeding two years or a fine not exceeding twenty thousand baht, or both.

Section 51 Any person who contravenes Sections 21, 22 or 41 is liable to imprisonment for a period not exceeding one year or a fine not exceeding ten thousand baht, or both

Section 52 Any person who fails to comply with Sections 25 or 28 shall be liable to a fine not exceeding five thousand baht.

Section 53 Any person who violates Section 36 shall be liable to imprisonment for a period not exceeding five years or a fine not exceeding fifty thousand baht, or both

Section 54 Any person who violates Section 38 or 42 (2) is liable to imprisonment for a period not exceeding seven years or a fine not exceeding one hundred thousand baht, or both.

In the case where a person is convicted for violating Section 38, if it happens that that person has held, occupied, made use of or lived in land situated in a wild animal conservation zone within which he or she had committed the offence, the court shall have the power to order such person, workers, employees, agents and entourage of that person to leave the zone.

The management of trees or other plant life which the offender under Section 38 has cut, felled or cleared shall be in accordance with regulations laid down by the Director-General with the approval of the Committee, but such regulations shall not allow the sale of the items to any person other than a government agency.

Section 55 Any person who aids the hiding, selling, taking away, purchasing, accepting as a pledge, or who receives in any other way wild animals or their carcases which have been acquired through an offence committed under this Act shall be liable to imprisonment for a period not exceeding one year or a fine not exceeding ten thousand baht, or both

Section 56 Any person who causes posts, placards or other signs which have been located by officials in accordance with this Act to be moved, erased, blurred, damaged, or rendered useless shall be liable to imprisonment for a period not exceeding four years, or a fine not exceeding forty thousand baht, or both.

Section 57 All weapons, tools, instruments, beasts of burden, vehicles or any other machines which a person has used or employed in the commission of an offence, or has possessed as a result of the commission of an offence under Sections 16, 36, 38, 41 or 42 (2) shall be confiscated, whether or not any person is convicted

Section 58 All reserved and protected wild animals and their carcases, products derived from their carcases, or their nests which a person has acquired or possessed as a result of commission of an offence under this Act shall be confiscated by a court order

All items which the court has ordered to be confiscated shall be deemed state property. The Royal Forest Department or the Fisheries Department as the case may be shall deal with the items in accordance with regulations laid down by its Director-General with the approval of the Committee.

Section 59 In the case where an offender who is to serve a sentence under this Act is a legal person, the managing director, manager or agent of such legal person shall be subject to a penalty as prescribed for the particular offence committed, except where it can be proved that such person has no knowledge of or does not consent to the commission of the offence.

Section 60 For all the offences under this Act which prescribe a penalty of a fine only, the Director-General or the officials who have been assigned by the Director-General, in a Notification published in the Royal Government Gazette, shall have the power to impose fines, and if the accused has paid the fine within thirty days, the case shall be deemed terminated in accordance with the Criminal Procedure Code.

Transitional Provisions

Section 61 When a Ministerial Regulation has been issued in accordance with Section 6 (1), the existing protected wild animals and their carcases which are covered by the newly enacted Ministerial Regulation and which are in the possession of any person before the date on which the Regulation comes into force shall be dealt with in the following ways :

(1) The person in possession of protected wild animals of the types covered by the Ministerial Regulation before the date of its coming into force shall notify the officials concerned of the types and quantity of protected wild animals in his or her possession within ninety days from the date on which the Regulation becomes effective. After the officials concerned have investigated the matter and, if the owner or the person in possession of the animals does not wish to keep them, he or she shall sell the animals to a person licensed to establish and to run a public zoo enterprise under Section 29, or sell protected wild animals of the types specified under Section 17 to a breeding licensee under Section 18 within one hundred and twenty days from the date of notification to the

officials. After that time limit, if there remain protected wild animals which have not been sold, those animals shall be deemed state property and the owner or the person in possession of the animals shall hand them over to the Royal Forest Department, or the Fisheries Department as the case may be, so that the animals will be duly dealt with in accordance with regulations laid down by the Director-General with the approval of the Committee. In the case where the animals concerned are of the types specified under Section 17 and the owner or the person in possession of them wishes to breed them, he or she shall apply for a breeding licence in accordance with Section 18 within thirty days from the date of notification to the officials After submitting the application, the applicant may continue to keep the animals in his or her possession.

In the case where the owner or the person in possession of protected wild animals wishes to continue to keep those animals, the officials concerned shall examine the living conditions and the care which have been provided for the animals by that person and decide whether they are sufficiently decent and safe for the animals If they are considered to be adequate, the Director-General may permit such person to continue to keep those animals by issuing a temporary licence to that person The licence is valid for the duration of the life of the animals concerned only. The licensees shall follow the regulations concerning caring for protected wild animals as laid down by the Minister with approval of the Committee, and shall notify the officials concerned when the protected wild animals in his or her care increase by reproduction or die.

(2) With respect to carcases of protected wild animals, a person in possession of them or their owner shall notify the officials concerned of the types and quantity of the items in his or her possession within ninety days from the date on which the Ministerial Regulation concerned becomes effective so that these can be registered After notification, such person may continue to keep the carcases. In the case where the carcases are kept for commercial purposes, the person possessing them shall proceed to sell all the items within three years.

Form and notification procedure in paragraphs 1 and 2 and the issue of a temporary licence for possession of protected wild animals and certificate for possessing their carcases shall be governed by provisions specified in a Ministerial Regulation

Section 62 It shall be deemed that protected wild animals listed in Category 1 and Category 2 under the former Conservation and Protection of Wild Animals Act B E. 2503 (1960) are protected wild animals under this Act.

Section 63 All the existing areas which were wild animal species conservation zones or non-hunting zones according to the law on the conservation and protection of

wild animals before this Act comes into force shall be deemed wild animal species conservation zones or non-hunting zones as the case may be under this Act.

Section 64 All existing Ministerial Regulations, regulations, and notifications which were in force before this Act shall continue to apply in so far as they do not contravene or conflict with this Act. This is the case until Ministerial Regulations, regulations and notifications issued under this Act come into force.

Section 65 All permission granted for hunting reserved wild animals, licences to hunt all categories of protected wild animals, licences to trade protected wild animals or their carcases, and licences to possess protected wild animals or their carcases, which have been issued before or on the day that this Act comes into force shall be deemed as having expired from the day that this Act comes into force.

Section 66 In the case any person who illegally possesses reserved or protected animals before or on the day that this Act comes into force, if he or she delivers the animals to the officials concerned within ninety days from that date, he or she shall be exempted from penalties, and the reserved or protected animals concerned shall be deemed state property. After having recorded the types and quantity of the animals which have been handed over, the Director-General may, if it is deemed expedient, allow the animals to remain in that person's care. Such decision shall be based primarily on the welfare and safety of the animals concerned.

Any person who illegally possesses carcases of reserved or protected wild animals before or on the day that this Act comes into force shall notify the officials concerned of the types and quantity of the carcases within ninety days from that date. After the officials have registered the items, he or she may continue to keep the carcases, but they cannot sell, dispense, or transfer them to any other person, except by way of inheritance.

Section 67 Any person who possesses reserved and protected wild animals, and their carcases before or on the day that this Act comes into force shall notify the officials concerned of the types and quantity of reserved and protected wild animals and their carcases within ninety days from that date. After the officials have recorded the notification, they shall proceed in the following ways :

(1) With respect to reserved wild animals, the owner or the person in possession of them shall sell them to another person establishing or running a public zoo enterprise who has obtained a licence under Section 29 within one hundred and eighty days from the date of notification to the officials concerned. After that period, if there remain reserved wild animals in that person's possession, the animals shall be deemed state property and he or

she shall hand them over to the Royal Forest Department, or the Fisheries Department as the case may be, so that the animals can be dealt with in accordance with regulations laid down by the Director-General with approval from the Committee

(2) With respect to protected wild animals, Section 61 shall apply *mutatis mutandis*.

(3) With respect to carcases of reserved wild animals, the owner or person in possession of them may continue to keep the items but he or she cannot sell, dispense, or transfer them to another person, except with a written permission from the Director-General, or when they are transferred by inheritance.

(4) With respect to protected wild animals in the possession of a person licensed to trade protected wild animals under the Conservation and Protection of Wild Animals Act B E. 2503 (1960), after the licensee has submitted an application to trade protected wild animals obtained through breeding in accordance with Section 68, that person may continue to trade protected wild animals of the types specified in Section 17 which have been obtained through breeding In the case of protected wild animals which are not covered by Section 17 and which have been obtained through breeding, the licensee must complete the sale of such animals within two years from the date of notification to the officials concerned. If after that period, there remain protected wild animals which are not covered by Section 17 and which have been obtained through breeding, such animals shall be deemed to be state property, and they must be handed over to The Royal Forest Department or the Fisheries Department as the case may be so that they will be dealt with in accordance with regulations laid down by the Director-General with approval of the Committee.

(5) With respect to carcases of protected wild animals which are in the possession of a person licensed to trade carcases of protected wild animals under the Conservation and Protection of Wild Animals Act B E. 2503, after the officials concerned have made a survey and recorded the types and quantity of existing protected wild animals' carcases in the licensee's possession, the Director-General shall issue a temporary licence to such person to trade the items The licensee shall complete the sale of the items within three years from the date of issue of the temporary licence He or she shall also prepare a monthly report to the officials concerned of the type and quantity of protected wild animals' carcases which have been sold by him or her in accordance with regulations laid down by the Director-General. If after that time limit, there remain protected wild animals' carcases in the licensee's possession, such items shall be deemed to be state property and they shall be handed over to the Royal Forest Department or the Fisheries Department as the case may be, so that they can be dealt with in accordance with regulations laid down by the Director-General with the approval of the Committee, except where the carcases are of the types specified under Section 17 which have been obtained through breeding and that

person has already applied for a licence to trade carcases of protected wild animals which have been obtained through breeding in accordance with Section 68.

The form and notification procedure in paragraph 1 shall be in accordance with the provisions stipulated in a Ministerial Regulation

Section 69 Any person establishing and running a public zoo enterprise before or on the date that this Act comes into force shall submit an application for a licence under this Act within thirty days from that date. After the officials concerned have received such application and, after investigation, are satisfied that the area and location of the enterprise comply with the provisions in Section 30 (2) and (3) and Section 31, and have duly recorded the types and quantity of reserved and protected wild animals and their carcases, the Director-General shall issue a licence to that person to establish and run a public zoo enterprise.

Section 70 Any application for a licence submitted before or on the date that this Act comes into force and is pending the Director-General's decision shall be deemed as having expired, except where such application concerns activities which may be permitted under this Act, in which case the Director-General shall continue to consider the application

Countersigned by

Anand Panyarachun
Prime Minister

List of Reserved Wild Animals

1. Pseudochelidon sirintarae
2. Rhinoceros sondaicus
3. Didermocerus sumatrensis
4. Bos sauveli
5. Bubalus bubalis
6. Cervus eldi
7 Cervus schomburgki
8 Capricornis sumatraensis
9. Naemorhedus griseus
10. Pitta gurneyi
11. Grus antigone
12 Pardofelis marmorata
13. Tapirus indicus
14. Muntiacus feai
15. Dugong dugon

Note . - The reasons for the enactment of this Act are that the existing law on the conservation and protection of wild animals has been in force for a long time and the existing legal measures fail to achieve the objective of efficient conservation and protection of wild animals. In addition, it is necessary to speed up breeding of wild animals and to provide conservation and protection for wild animals simultaneously. Furthermore, since there is at present an international agreement to cooperate in the conservation and protection of local wild animals which are important global resources, it is appropriate to improve the law on the conservation and protection of wild animals in accordance with international conventions.

Appendix II
Selected Relevant Provisions in the Enhancement and Conservation of National Environmental Quality Act B.E. 2535 (1992)*[1]

Section 6 For the purpose of public participation in the enhancement and conservation of national environmental quality, the following rights and duties may be accorded to individual person as provided by this Act or governing law related therto :

(1) To be informed and obtain information and data from the government service in matters concerning the enhancement and conservation of environmental quality, except the information and data that are officially classified as secret intelligence pertaining to national security, or secrets pertaining to the right to privacy, property rights, or the rights in trade or business of any person which are duly protected by law.

(2) to be remedied or compensated by the State in case damage or injury is sustained as a consequence of dangers arisen from contamination by pollutants or spread of pollution, and such incident is caused by any activity or project initiated, supported or undertaken by government agency or state enterprise.

(3) To petition or lodge complaint against the offender in case of being a witness to any act committed in violation or infringement of the laws relating to pollution control or conservation of natural resources

(4) To co-operate and assist government officials in the performance of duty relating to the enhancement and conservation of environmental quality.

(5) To strictly observe the provisions of this Act or other laws concerning the enhancement and conservation of environmental quality.

Section 7 In order to encourage public participation in the promotion and conservation of environmental quality, non-governmental organizations (NGOs) having the status of a juristic person under Thai law or foreign law which are directly engaged in activities concerning environmental protection or conservation of natural resources without any objective to be involved in politics or to make profits from the engagement in such activities, shall be entitled to register with the Ministry of Science, Technology and Environment as the NGOs for environmental protection and conservation of natural

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[1] This Act has been translated into English by the Environmental Law Center of Thailand and this translation has been published by the Department of Environmental Quality Promotion of MOSTE as an official dissemination document Thus, the original translation is completely retained Only certain provisions specifically related to air pollution control and certain principles of sustainable development are reproduced here

resources in accordance with the rules, procedures and conditions prescribed by ministerial regulation.

Section 8 The NGOs that have been registered pursuant to Section 7 may request for government assistance or support in the following matters :

(1) the organization of volunteers to assist in the performance of duty of government officials under this Act or other laws concerning the enhancement and conservation of environmental quality

(2) Public relations campaign and dissemination of information or data to promote awareness and proper understanding and knowledge about environmental protection and conservation of nature and natural resources.

(3) Providing assistance to people in certain areas of the country to initiate projects or activities for environmental protection and conservation of natural resources in such areas

(4) conducting study and research in respect of environmental protection and conservation of natural resources and bringing to the attention of the Government or agencies concerned on what are the viewpoints and suggestions based upon the outcome of such study and research.

(5) providing legal aid to people who are in jeopardy of or afflicted by pollution damage caused by leakage of pollutants or contamination as well as acting as representative of such pollution victims to bring law suit and litigate claim in court for compensation or damages to which they are entitled as legal remedies.

In case any registered NGOs, in the carrying out of activities indicated in the first paragraph, encounter problems or difficulties and request for help from the National Environment Board, the Prime Minister shall, with the recommendation of the National Environment Board, have the power to direct for appropriate recourse or order the government agency or state enterprise concerned to render assistance or facilitation as seen fit under the circumstances

The Fund Committee,[2] with the approval of the National Environment Board, may consider to allocate grants or loans in support of any activity of the registered NGOs as deemed appropriate

The registered NGOs may propose for nomination of candidates as representatives of the private sector to be appointed by the Cabinet as qualified members of the National Environment Board

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[2] The Fund Committee is the Committee to consider allocation and use of the Environmental Fund (writer's note)

In case any registered NGO's activities are undertaken by causing disturbances or contrary to public order or unsuitable, the Minister[3] shall have the power to revoke the registration of the NGO involving in such activities.

Section 12 There shall be a National Environment Board consisting of the Prime Minister as the Chairman, a Deputy Prime Minister designated by the Prime Minister as the first Vice Chairman, the Minister of Science, Technology and Environment as the second Vice Chairman, the Minister of Defence, the Minister of Finance, the Minister of Agriculture and Cooperatives, the Minister of Transport and Communications, the Minister of Interior, the Minister of Education, the Minister of Public Health, the Minister of Industry, the Secretary-General of the National Economic and Social Development Board, the Secretary -General of the Board of Investment, the Director of the Bureau of the Budget as members *ex officio* and members qualified in environmental matters not more than eight persons of which no less than half shall be representatives from the private sector and the Permanent Secretary of the Ministry of Science, Technology and Environment as member and secretary

The appointment of qualified members shall be made by drawing from persons who are knowledgeable and known for their expertises, contributions and experiences in the matters concerning the enhancement and conservation of environmental quality

Section 13 The National Environment Board shall have the power and duty as follows :

(1) To submit policy and plan for enhancement and conservation of national environmental quality to the Cabinet for approval.

(2) To prescribe environmental quality standards pursuant to Section 32

(3) To consider and give approval to the Environment Quality Management Plan proposed by the Minister according to Section 35.

(4) To consider and give approval to the Changwat[4] Action Plan for environmental quality management according to Section 37.

(5) To make recommendations to the Cabinet in respect of financial, fiscal, taxation and investment promotion measures for the implementation of the policy and plan for enhancement and conservation of national environmental quality

(6) To propose for amendment or improvement of laws relating to the enhancement and conservation of environmental quality to the Cabinet.

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[3] The Minister in this Act is the Minister of Science, Technology and Environment unless otherwise stated (writer's note)

[4] "Changwat" means a province (writer's note)

(7) To consider and give approval to the action plan for prevention and remedy of danger caused by contamination of pollutants or spread of pollution proposed by the Pollution Control Committee pursuant to Section 53 (1).

(8) To consider and give approval to the setting of emission or effluent standards proposed by the Minister pursuant to Section 55.

(9) to supervise, oversee and expedite the enactment of royal decrees and issuance of ministerial regulations, rules, local ordinances, notifications, by-laws and orders which are necessary to ensure systematic operation of the laws relating to enhancement and conservation of environmental quality to the fullest extent possible.

(10) To submit opinion to the Prime Minister for his directions in case it appears that any government agency or state enterprise infringes or refrains from complying with the laws and regulations for environmental protection which may cause extensive damage to the environment

(11) To specify measures for the strengthening and fostering of co-operation and co-ordination among government agencies, state enterprises and the private sector in matters concerning the promotion and conservation of environmental quality.

(12) To supervise the Fund management and administration.

(13) To submit reports on national environmental quality situation to the Cabinet at least once a year

(14) To perform other functions as may be provided by this Act or other laws to be within the authority of the National Environment Board.

Section 32 For the purpose of environmental quality enhancement and conservation, the National Environment Board shall have the power to prescribe by notifications published in the Government Gazette the following environmental quality standards :

(1) Water quality standards for river, canal, swamp, marsh, lake, reservoir and other public inland water sources according to their use classifications in each river basin or water catchment.

(2) Water quality standards for coastal and estuarine water areas

(3) Groundwater quality standards.

(4) Atmospheric ambient air standards

(5) Ambient standards for noise and vibration.

(6) Environmental standards for other matters

The prescription of environmental quality standards pursuant to the foregoing paragraph shall be based upon scientific knowledge, principles, criteria and evidence related thereto and shall also take into account the practicability of such standards from the viewpoint of economic, social and technological considerations.

Section 33 The National Environment Board shall, if deemed reasonable, have the power to prescribe special standards, which are higher than the environmental quality standards prescribed pursuant to Section 31, for the protection of areas designated as conservation or environmentally protected area according to Section 42, or areas designated according to Section 44, or pollution control areas designated pursuant to Section 58.

Section 34 The National Environment Board shall have the power to make appropriate modifications and improvements to the prescribed environmental quality standards in the light of scientific and technological progresses and changes in economic and social conditions of the country.

Section 52 for the purpose of pollution control under this Act, there shall be a committee called the "Pollution Control Committee" (PCC) which consists of the Permanent Secretary of the Ministry of Science, Technology and Environment as the Chairman, the Director-General of the Department of Local Administration, the Director-General of the Police Department, the Director-General of the Department of Land Transport, the Director-General of the Harbour Department, the Director-general of the Department of Public Works, the Director-General of the Health Department, the Director-General of the Department of Agriculture, the Director-General of the Department of Environmental Quality Promotion, the Secretary-General of the Office Environmental Policy and Planning, the Permanent Secretary for the Bangkok Metropolitan Administration and not more than five qualified persons appointed by the National Environment Board as members and the Director-General of the Department of Pollution Control as member and secretary.

Section 14 and Section 15 shall apply *mutatis mutandis* to the holding office of the qualified members in the Pollution Control Committee.

Section 53 The Pollution Control Committee shall have the power and duty as follows :

(1) To submit an action plan for prevention or remedy of pollution hazards or contamination to the National Environment Board.

(2) To give opinion and recommend the National Environment Board on proposed amendments to or improvements of any laws concerning the control, prevention, reduction or eradication of pollution

(3) To propose incentive measures regarding taxation and private investment promotion in relation to pollution control and promotion and conservation of environmental quality to the National Environment Board.

(4) To recommend the National Environment Board on the determination of service fee rate for the central wastewater treatment or central waste disposal services of the government.

(5) To give advice to the Minister on the setting of emission or effluent standards under Section 55.

(6) To give advice to the Minister concerning the types of point sources of pollution that will be required to comply with Section 68 and Section 69.

(7) To make recommendation on the issuing of ministerial regulations specifying the types and categories of hazardous wastes under Section 79.

(8) To coordinate government agencies, state enterprises and the private sector in their actions to control, prevent, mitigate or eradicate pollution.

(9) To prepare and submit the report on pollution situation to the National Environment Board once a year.

Section 55 The Minister shall, with the advice of the Pollution Control Committee and the approval of the National Environment Board, have the power to publish notification in the Government Gazette prescribing emission or effluent standards for the control of wastewater discharge, polluted air emissions, or discharge of other wastes or pollutants from point sources into the environment in order to meet the environmental quality standards set by virtue of this Act for the conservation of national environmental quality.

Section 56 In case there have been standards prescribed by virtue of the other laws concerning wastewater discharges, polluted air emissions, or discharge of other wastes or pollutants from point sources of pollution into the environment and such standards are no less stringent than the emission or effluent standards set by the Minister by virtue of Section 55, such standards shall continue to be effective by virtue of the laws related thereto. If, however, such standards are less stringent than the emission or effluent standards set by the Minister pursuant to Section 55, the government agencies empowered by such laws shall amend such standards in conformity with the emission or effluent standards under this Act If there is any obstacle preventing from doing so, the National Environment Board shall resolve on such matter and the government agencies concerned shall act in accordance with such resolution.

Section 57 In case any government agency is empowered by the other law to prescribe emission or effluent standards in any matter, but that government agency fails to exercise its power, the Minister shall, with the recommendation of the Pollution Control Committee and with the approval of the National Environment Board, publish notification in the Government Gazette prescribing the emission or effluent standards in question and such standards shall be deemed to have been set by the governing law on such matter.

Section 64 Usable vehicle shall conform to the emission standards prescribed for such vehicle pursuant to Section 55.

Section 65 If it is found that the use of any vehicle is in violation of Section 64, the competent official shall have the power to prohibit the use of such vehicle permanently or until it will have been modified or improved to meet the emission standard requirements prescribed pursuant to Section 55.

Section 66 In issuing the order prohibiting use of vehicle according to Section 65, the competent official shall make the sign clearly shown by the words "Use Prohibited Permanently" or "use Prohibited Temporarily" or any other sign, known and understood by the general public to have the same meaning, on any part of such vehicle.

The making or removal of the sign under the first paragraph, or the use of vehicle while the said sign is on, shall be in accordance with the rules, methods and conditions specified in the ministerial regulation.

Section 67 In performing his duty under Section 65, the competent official has the power to stop and inspect the vehicle or to do any act necessary to check and test the engine and equipment of such vehicle.

Section 68 The Minister shall, with the advice of the Pollution Control Committee, have the power to publish notification in the Government Gazette specifying the types of point sources of pollution that shall be controlled in regard to the emission of polluted air, ray, or other pollutants, in the form of smoke, fume, gas, soot, dust, ash, particle or any other form of air pollutant, to the atmosphere, in conformity with the emission standards prescribed under Section 55, or standards prescribed by any government agency by virtue of the other law which remain in force according to Section 56, or standards set by the Changwat Governor in special case for the pollution control area according to Section 58.

The owner or possessor of the point source of pollution under the first paragraph has the duty to install or bring into operation an on-site facility for air pollution control,

equipment or other instrument as determined by the pollution control official in order to control, dispose, reduce or eliminate pollutants which may affect the air quality, unless such facility, equipment or instrument has already been in place and still in a working condition upon the inspection and test by the pollution control official. For the purpose of this Section, the pollution control official may also require that the operation of such facility, equipment or instrument be controlled by the Monitoring Control Operator.

The provisions of the first and second paragraphs shall apply *mutatis mutandis* to the point source of pollution which emit or generate noise or vibration in excess of the emission standards set pursuant to Section 55, or the standards set by any government agency by virtue of the other law which remains in force according to Section 56, or the standards set by the Changwat Governor in special case for the pollution control area according to Section 58.

Section 80 The owner or possessor of the point source pollution, required by virtue of Section 68 or Section 70, to have his own facility for treatment of polluted air, equipment or instrument for control of the discharge of polluted air or other pollutants or the wastewater treatment or waste disposal facility, shall have the duty to collect statistics and data showing the daily functioning of the said facility or equipment and instrument, and make detailed notes thereof to be kept as recorded evidence at the site of that point source of pollution, and shall submit report summarizing the functioning results of the facility, equipment or instrument to the local official of the locality where such point source is situated at least once a month.

The collection of statistics and data, the making of notes and reports shall be in accordance with the rules, procedures, methods and format specified by ministerial regulation.

In case the facility for treatment of polluted air, wastewaters or waste disposal or equipment and instrument indicated in the first paragraph requires a Monitoring Control Operator as determined by the pollution control official, the Monitoring Control Operator shall have the duty to act under the first paragraph on behalf of the owner or possessor.

The Service Contractor licensed to render wastewater treatment or waste disposal services shall have the duty to do the same as the owner or possessor of the point source of pollution is required under the first paragraph.

Section 82 In order to perform his functions under this Act, the pollution control official is empowered as follows :

(1) To enter into the building, place and site of the factory or point source of pollution or the site of wastewater treatment or waste disposal facility which belongs to any person, between the sunrise and sunset or during the working hours, to inspect the

functioning process of wastewater treatment or waste disposal facility, air pollution control system or equipment and other instrument for the control of polluted air or other pollutants, as well as to examine the notes, statistics or data on the functioning of the said facility, equipment and instrument, or when there is a reasonable suspicion that there is a non-compliance with this Act.

(2) To issue an order in writing directing the owner or possessor, the Monitoring Control Operator, or the licensed Service Contractor rendering the services of wastewater treatment or waste disposal, to correct, change, improve or repair the air pollution control, wastewater treatment or waste disposal facility or other equipment and instrument for the control of polluted air or other pollutants. If, however, the point source of pollution is a factory, the official under the law on industrial plants shall be notified to take action within his power and duty. If such official fails to do so, the pollution control officials shall have the power to take action in accordance with this Act.

(3) To issue a written order directing the owner or possessor of the point source of pollution which is not a factory to pay penalties as provided under Section 90, Section 91 or Section 92. If the point source of pollution is a factory, the official under the law on industrial plants shall be notified to order the owner or possessor of such factory to pay the penalties and, in doing so, such official under the law on industrial plants shall be deemed to be the pollution control official under this Act. If, however, such official fails to issue the penalty order within a reasonable time, the pollution control official shall then have the power to issue the order directing the owner or possessor of such factory to pay the penalties.

(4) To issue a written order directing the Service Contractor licensed to render the services of wastewater treatment or waste disposal to stop or shut down his services, or revoking his licence in case such Service Contractor violates or does not comply with this Act, or any ministerial regulation, local ordinance, rule, notification or condition issued or stipulated by virtue of this Act, or does not comply with the order of the pollution control official issued by virtue of this Act.

(5) To issue a written order suspending the Monitoring Control Operator under Section 68 or Section 70 in case such Monitoring Control Operator violates or does not comply with this Act, or any ministerial regulation, local ordinance, rule, notification, or condition stipulated by virtue of this Act, or does not comply with the order of the pollution control official issued by virtue of this Act.

Section 94 The owner or possessor of any point source of pollution who has the duty according to this Act or other related laws to install an on-site facility for treatment of polluted air or wastewaters or for disposal of other wastes, including the procurement of any equipment, instrument, tools, appliances or materials necessary for control of pollution

from such point source, or the Service Contractor licensed pursuant to this Act, is entitled to request for promotional supports and assistance from the government service in the following matters :

(1) Request for assistance regarding import duties for the import into the Kingdom of necessary machinery, equipment, instrument, tools, appliances or materials which are not available in the Kingdom.

(2) Application for permission to bring foreign experts or specialists into the country to carry out works concerning the installation, monitoring, control or operation of air pollution control systems, wastewater treatment works or waste disposal facilities in case qualified persons within the Kingdom are not available for recruitment and commissioning to supervise and control machinery, equipment, instrument or tools imported into the Kingdom pursuant to sub-section (1), including application for exemption of income tax that will incur from the performance of work as a supervisor of such person within the Kingdom.

The owner or possessor of the point source of pollution who has no legal duty as referred to in the foregoing first paragraph, but nonetheless wishes to install an on-site facility with his own equipment, instrument, tools or appliances for air pollution control, wastewater treatment or for disposal of other wastes emanated from his activities or business undertakings, is also entitled to request for promotional supports and assistance from the government service in accordance with the foregoing first paragraph.

Section 95 The request for promotional supports and assistance according to Section 94 shall be made to the National Environment Board in accordance with the rules, procedures, methods and formats prescribed by ministerial regulation.

The National Environment Board shall consider and proceed with the request for promotional supports and assistance according to the foregoing first paragraph as it sees fit, taking into account the economic, financial and investment necessities of each individual applicant. In case it is considered appropriate to give assistance to the applicant, the National Environment Board shall recommend the government agencies concerned to act within their powers and functions to render promotional supports and assistance to the applicant accordingly.

Section 96 If leakage or contamination caused by or originated from any point source of pollution is the cause of death, bodily harm or health injury of any person or has caused damage in any manner to the property of any private person or of the State, the owner or possessor of such point source shall be liable to pay compensation or damages thereof, regardless of whether such leakage or contamination is the result of a wilful or

negligent act of the owner or possessor thereof, except in case it can be proved that such pollution leakage or contamination is the result of :

(1) Force majure or war.

(2) An act done in compliance with the order of the Government or State authorities.

(3) An act or omission of the person who sustains injury or damage, or of any third party who is directly or indirectly responsible for the leakage or contamination.

The compensation or damages to which the owner or possessor of the point source of pollution shall be liable according to the foregoing first paragraph shall mean to include all the expenses actually incurred by the government service for the clean-up of pollution arisen from such incident of leakage or contamination.

Appendix III

Draft Regulation Governing Access to Genetic Resources[1]

1. Rationale

Thailand is a country with high biodiversity. It has always engaged in international exchange of plant genetic resources used in agriculture With respect to other biological resources, Thailand has regulations which allow foreign researchers to seek permission for conducting research in the country, including research in protected areas where permission is granted by the governmental agencies concerned.

However, Thailand still does not have regulations which allow bargaining of terms and conditions governing access to biological resources and there is no national central agency to supervise the matter so that bargaining of access agreement can be based on a uniform standard and equity

It is therefore necessary that regulation be issued for this purpose. Persons seeking access to biological resources have to apply for permission in accordance with specified procedures and conditions. This process accords with the Convention on Biological Diversity which encourages Parties to facilitate access to genetic resources based on mutually agreed terms.

2. Definitions

"Biological resources" includes genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity

"Genetic material" means any material of plant, animal, microbial or other origin containing functional units of heredity

"Genetic resources" mean genetic material of actual or potential value.

"Access" means giving of information concerning biological resources, exploration, collection of samples or any other acts for the purpose of making use of biological resources.

"Export" means sending outside the Kingdom.

The term "biological resources" in this regulation will be used to cover genetic resources in agriculture and in nature, including herbs

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1 This draft regulation is merely in a preparatory stage by the Office of Environmental Policy and Planning of MOSTE in Thailand Therefore, it may not be cited or reproduced by any means The draft will probably be substantially amended and adjusted before getting a final approval Its inclusion here is aimed to provide one of the few examples of such possible regulations in developing countries at present This draft has been informally translated by the writer The writer wishes to thank Prof Birnie for making improvements in the use of English in this translation

3. Authorised Agencies and Organizational Structure

3.1 Administrative Organization

(1) An organ or National Centre under a governmental agency will be set up. It must be a legal person possessing capacity to conclude juristic acts, such as concluding an agreement or contract governing sharing of benefits or research cooperation It will be called the National Centre for Research and Development on Biological Diversity.

(2) A national central committee, called the Central Committee for National Research and Development in Biological Resources, is to be established, consisting of representatives from agencies having powers to control access and export of biological resources. The Committee is authorised to grant permission to access and export of biological resources.

3.2 Administrative Structure

(1) Persons seeking access and export of biological resources must apply to the Centre together with supporting evidence, such as project proposals and other documentary evidence.

(2) In the case where the biological resources concerned belong to a private person or are protected by the Patent Act B E. 2522 (1979) as amended in B E.2535 (1992), the Centre will process the application to that private person for permission If permission is obtained, the applicant can proceed to export the materials according to prescribed procedures.

(3) In the case where the biological resources concerned are under the responsibility of a governmental agency, the Centre will process the application to the respective agencies which fall within the following two cases :

- Natural biological resources in protected areas supervised by the Royal Forest Department and the Department of Fisheries.

- Propagated and cultivated materials which are not in protected areas and are under the responsibility of the Department of Agricultural Extension, Department of Livestock and other governmental agencies.

(4) When the governmental agency concerned gives its permission, the Centre will process the application to the Central Committee to consider the terms and conditions according to prescribed rules, conditions and methods, including opinion submitted by the counterpart research agency in Thailand

(5) In the case where the Central Committee grants its approval, the application will be sent back to the Centre so that the applicant can be called to negotiate details and conditions. After this is completed, an agreement will be concluded and an access licence will be issued

(6) In the case of application for access to conduct research, there must be a Thai agency participating as counterpart in the research.

(7) In the case of (6) above, research results together with other evidence must be submitted to the Central Committee so that it can examine whether the study has been conducted according to the conditions agreed in the access agreement. The examination is to be conducted jointly with the Thai counterpart research agency.

(8) If the Central Committee is satisfied with the evidence submitted, the biological resources concerned can then be exported.

4. Rules, Conditions and Application Procedures

(1) Persons eligible to apply for access must possess the following characteristics :

- It must be a company, foundation, co-operative, institute, organ or agency of States which are Party to the Convention on Biological Diversity

- In the case where an entity wishes to apply before acquiring the status specified in the above paragraph, the State Party hosted the entity must provide a guarantee to enable it to proceed with an application according to the rules, conditions, methods and forms prescribed by the Center.

(2) Utilsable biological resources

- Biological resources to which and of which the Central Committee may allow access and export include those resources which are not protected by other laws

- The Central Committee has the power to notify the types or classes of biological resources which require no permission for access and export whether or not with attached conditions The conditions can be amended or repealed at any time by the Committee.

- When the Central Committee considers any biological resource which has previously been declared as requiring no permission to be a resource which now requires permission for access and export, the Committee may suspend or repeal its previous notification.

- An applicant must file an application in the prescribed form to the Centre and in accordance with the rules, conditions and methods determined by the Centre This must be accompanied by a project proposal which contains details required by the Centre, evidence of the legal personality of the applicant entity and other important documents

(4) Rules governing consideration of project proposals :

The project seeking access and export of biological resources to which the Central Committee may grant permission must be based on technological feasibility, commercial development and equitable sharing of benefits.

The following factors are to be taken into account :

- Types and quantity of biological resources required

- The target area where access is being sought

- Methods and technology employed in exercising access.
- Researchers or representatives in Thailand who will participate in the project.
- Financial capital required to exercise access
- Purposes for utilisation of the biological resources both at present and in the future
- Observance of conditions after permission is granted.
- Limitations on utilisation.
- Proposed sharing of benefits.
- Violation of human rights
- Violation of animal rights and ethics in utilisation of living organisms.
- Other rules which the Central Committee deems appropriate.

(5) Time limit for processing an application :

- The Centre will complete its consideration of an application for access to biological resources within 60 working days. It has the power to summon an applicant to explain the application in more details and to furnish additional documents After the Centre and the Central Committee approve the application, the applicant must be notified within 7 working days

(6) An access agreement must be completed within 7 working days.

(7) the Centre must demand a sum to be deposited as a guarantee that no damage and loss may be caused to the biological resources to which access is sought, together with a licence fee as determined by the Centre before a licence is issued

(8) A licence will be valid for a period not exceeding one year. Renewal, suspension or revocation of licence in case a licensee does not observe the terms stipulated in an access agreement will be in accordance with rules, conditions and methods prescribed by the Centre.

Rules Governing Access and Export of Biological Resources

Co-ordination and Application for Permission

1 An applicant must co-ordinate with its counterpart researcher, institute/agency in Thailand in advance

2. An applicant must file an application for access to biological resources with the Centre before entering Thailand, together with details concerning the access project.

3. An applicant must enter Thailand with a research or plant collector visa, not a tourist visa.

4. After permission is granted by the Central Committee, the applicant must conclude a contract with the Centre according to prescribed guidelines

Exploration and Collection of Samples

5. When permission is granted to an applicant to explore and collect samples in a protected area, the applicant must strictly observe regulations governing that area.

6 In exploring or collecting biological resources, there must be Thai researchers or representatives participating in all occasions and the applicant must be responsible for their expenses.

7. The applicant may collect only species, genus and family of resources to which it has been granted access and only those parts covered by the application for the purpose of utilisation or research The applicant may not collect inappropriate quantity of the resources. Collection must not be conducted in such a way that would cause extinction to the resources and destroy their habitats. It must also not create impacts on other resources situated nearby. Should there be damage resulting from collection of samples, due compensation must be made by the applicant.

8. In the case where a rare or endangered species is discovered, the applicant must inform the Centre and the Thai counterpart institution/agency of the species and location where it is found.

Analysis and Research

9. After exploration and sample collection are completed, duplicate specimens, together with their detailed information including location where the samples are collected which would be useful for further collection, photos and slides of specimens must be provided to the Centre or the Thai counterpart institute/agency

10. In the case where a new species is discovered as a result of research, their types specimens must be delivered to a museum or botanic garden in Thailand

11. Preliminary research should be conducted in the Thai counterpart institute or agency, such as plant extraction, study of biological activity etc This includes development of expertise for Thai counterpart researchers.

12. Research techniques employed must not conflict with ethics concerning research utilising living organisms.

Export

13 Where an applicant wishes to export biological resources, it must apply for permission to export them in a form together with the application form for access to such resources.

14. An applicant must follow strictly the rules, conditions and means of export of biological resource samples, for example, those concerning plant quarantine, CITES provisions and IATA (International Air Transportation Association's Life Animal Regulation) etc.

15 Export of biological resources which are rare/endangered or of ecological value must be in accordance with rules or laws governing the subject.

16 The applicant must provide the Centre and the Thai counterpart institute/agency with clear information concerning the place where samples originated and collected from Thailand would be stored, and must co-ordinate with them for transfer of additional information in the future.

Appendix IV
Panat Tasneeyanond and others v. The Prime Minister and others[1]

The plaintiffs are Mr. Panat Tasneeyanond, the Administrative Director of the Environmental Law Centre of Thailand, and six others with residence in the areas affected by the Government's administrative decision concerning the use of an area of wetland which is the subject of this case, namely Soi Pahonyotin 5 (Soi Rachacroo), Soi Pahonyotin 7 (Soi Aree), Soi Pahonyotin 11 (Soi Relvadee), Pahonyotin Road, Pibulvatana Village, and the communities of Soi Aree Samphan and Soi Sasana, on Phra Ram 6 Road, which together cover an area of 109 rai (17 44 hectares).

The defendants are Mr. Chuan Leekpai (the then Prime Minister) and who was, *ex officio*, the Chairman of the National Environmental Board or the NEB (hereinafter referred to as the first defendant); Mr. Pisan Moolasassaton, the then Minister of Science, Technology and Environment (MOSTE), who was responsible for the implementation of the National Environmental Quality Act of 1992 (NEQA) and who also held the position of Vice-Chairman to the NEB (hereinafter referred to as the second defendant); and M R Juttumongkon Sonakul, the Director-General of the Revenue Department under the Finance Ministry (hereinafter referred to as the third defendant).

The case was brought on 21 April, 1994 in the Civil Court (which is the Court of first instance for civil cases in the Bangkok Metropolitan Area). The plaintiffs alleged that the defendants were liable for damage to and degradation of the quality of the environment, resulting from their wrongful acts and for causing nuisance. The plaintiffs were represented by Mr. Panat Tasneeyanond, the Administrative Director of the Environmental Law Centre which is a foundation for promoting environmental quality and providing an advisory service to the public and other environmental NGOs The facts of the case were as follows

By a Cabinet Decision of 10 September 1992, when Mr. Anand Panyarachun was acting as Prime Minister, the Cabinet approved the construction of governmental buildings for the third defendant's Department and the Public Relations Department which were to be sited in the disputed area in substitution for old buildings which had been destroyed during the political unrest which occurred between 17-20 May, 1992. The disputed area consisted of marshes, swamps and fens, and, there had been an earlier Cabinet Decision of 29 August 1989 to preserve the area for purposes of storing rain water and to act as a flood control region for the area of Soi Pahonyotin 7 and the adjacent areas where the plaintiffs had their residence. As residents in the area, the plaintiffs had enjoyed its amenity and recreational values as an open and green space, which had for decades also served as the "lung" for the whole areas of Payathai District. It had also enabled the plaintiffs to enjoy the clean air which was their legal right as well as that of other residents living around the disputed area who were entitled to a good and decent environment under the 1991 Constitution, the 1992 NEQA, and proclaimed governmental policies The rights to enjoy clean air and freedom from damage resulting

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[1] This document has been translated by the writer from the pleadings of the case in the Court of Appeal and the Supreme Court of Thailand The case is currently pending in the Supreme Court The document has been adapted in some parts to avoid repetition The writer wishes to thank Professor P. Birnie for tidying the use of English in this translation and the Environmental Law Center of Thailand for supplying the material

from flooding by preserving the disputed area as an open green space and area of natural water storage are, therefore, the public rights of the plaintiffs and other Thai citizens according to Thai constitutional law and the principles of public law in a democratic system and are rights therefore which the Thai Government must respect. The Cabinet Decision of 10 September 1992, which authorised the third defendant and the Public Relations Department to construct buildings more than ten-storeys high, will result in substantial pollution and degradation of the air in the area and is thus unlawful in that it would violate the plaintiffs' public rights and contravene the Cabinet Decision of 29 August 1989. In addition, according to a survey conducted by the Office of Nature Conservation of the Royal Forest Department in May 1993, the disputed area possesses the characteristics of a wetland, consisting of various marshes and swamps and a big fen near Pibulvattana Village. The water in the marshes is classified as of good quality. Most of the area consists of swamps with seasonal variations in the water level. Aquatic plant species are scattered throughout the area, as also are native and foreign plant species There is also a mixture of big trees and shrubs. In addition, wild species, reptiles, small mammals, aquatic animal species, numerous birds and insects are also found therein Thus, the disputed area is composed of a natural wetland ecosystem which is still fairly fertile according to the criteria for classification of protected areas in the Royal Forest Department. It follows that the area possesses natural resources and values which merit its being declared an "environmental protected zone" within the meaning of Sections 43 and 44 of the 1992 NEQA, which entitles it to be preserved for common use according to Section 1304 of the Civil and Commercial Code. The fact that for decades the plaintiffs and other citizens living in the nearby areas have utilised the disputed area for commuting, recreation and health development, natural study and research and the collecting of plants and aquatic species by poor people in effect qualifies the area as public land for communal use within the meaning of Section 1304 (2) of the Civil and Commercial Code, which expressly provides for, guarantees and protects a public right to common use of public land. The public right of the plaintiffs and all citizens who have common use of the area can specifically include the right to clean air which is necessary for good health and quality of life, the right to enjoy recreational values characteristic of the natural ecosystem of the disputed area; the right to be free from damage resulting from flooding, nuisance caused by traffic jams, air and noise pollution, dust and smoke caused by vehicles and building construction, as well as heat ventilated from high buildings and their air-conditioners; and the right to be free from visual pollution caused by the presence of high buildings in the disputed area. Therefore, the acts of the third defendant from March 1994 in starting to level the area by digging, filling and covering up the area, and cut trees and plants which provide the habitats of animal species living in the disputed area, as a preparation for the third defendant's governmental building, constitute an intention to cause damage and to destroy the environment and natural resources in the disputed area. By these acts, the third defendant has challenged and violated the public right of the plaintiffs and the people living in the surrounding areas. He has also caused nuisance which has resulted in special damage to the plaintiffs and other people concerned suffer as a result.

At the time when the plaintiffs and people living in the surrounding areas first learned of the plan to construct governmental buildings in the disputed area, the plaintiffs and residents in the areas signed petitions addressed to the third defendant and other governmental agencies concerned, namely the Public Relations Department, the Royal Forest Department; the Royal Estate Office; the Treasury Department, and the Committee on Governmental Buildings and New Town Planning, which was chaired by

General Chalvalit Yongchaiyut, the Minister of Interior, with Mr. Chumni Sakdiset, the Deputy Minister acting as Vice Chairman and Mr. Pannya Nakchatri, the Director of the Town Planning Office as both a member of and Secretary to the Committee, calling for them to suspend the construction of the third defendant's and other governmental buildings. In addition, the plaintiffs asked for detailed information with regard to the building plans and the arrangements concerning land use for such construction purposes but the third defendant and the governmental agencies concerned did not cooperate appropriately in providing the requested information On the contrary the third defendant did not suspend the construction of his office building, as requested by the plaintiffs.

Apart from submitting a petition and requesting information from the third defendant and the governmental agencies concerned, the first plaintiff, in his capacity as the Administrative Director of the Environmental Law Centre of Thailand, and in representing the other six plaintiffs in the case, as well as other affected citizens, has written to the Office of Environmental Policies and Planning (OEPP), which is a governmental agency under the responsibility of the second defendant, asking it to consider proposing to the NEB that it should declare the disputed area to be an "environmental protection zone" in accordance with Sections 43 and 44 of the 1992 NEQA. However, the OEPP and the second defendant did not proceed with this matter as requested by the first plaintiff Neither was any information on the reasons for their inaction provided to the plaintiffs or others affected. This was alleged by them to amount to a refusal to recognise the right to information of the plaintiffs and other citizens as provided for by Section 6 (1) of the 1992 NEQA, as well as an intentional omission by the second defendant to fulfil his official duty as the Minister responsible for the implementation of the Act, to protect the plaintiffs' and other citizens' rights which would ensue from declaration of the disputed area as an "environmental protection zone".

When the plaintiffs considered that their petitions had not been duly responded to by the second and third defendants and the governmental agencies concerned, they sent a letter, dated 16 December 1993, to the first defendant as the Head of the Cabinet and the Chairman of the NEB The plaintiffs and representatives of the people who would be directly and adversely affected by the construction of the third defendant's building requested a meeting with the first defendant in order to present him with the facts concerning the issue, to ask him to reconsider, or proceed to withdraw the Cabinet Decision of 10 September 1992 and to consider proposing to the NEB that it should declare the disputed area to be an "environmental protection zone" under the 1992 NEQA. But the first defendant neither replied to the plaintiffs' letter nor allowed them and others to have an audience with him, nor did he ever submit the matter to the Cabinet and the NEB for consideration, as proposed by the plaintiffs.

The facts that the first defendant did not take any action to submit the issue to the Cabinet inviting it to reconsider and withdraw the Cabinet Decision of 10 September 1992, that the first and second defendants did not consider proposing to the NEB that it declare the disputed area to be an environmental protection zone, and that the third defendant did not consider suspending the construction activities and instead accelerated them, were alleged to constitute intentional acts and omission causing destruction, loss and damage to environmental quality and natural resources belonging to the State which existed in the disputed area within the meaning of Section 97 of the 1992 NEQA. The defendants were also alleged to be liable for their wrongful acts causing nuisance and obstruction to the exercise by the plaintiffs and other affected citizens of their public rights to enjoy the common use of the disputed area and who had suffered special damage from the defendants' acts and omission

The plaintiffs and other citizens in the area had exercised all efforts and means available under the law and governmental regulations to remedy the problems, but these have not been appropriately responded to by the three defendants. Consequently, they found it necessary to bring the case to the Court as a last resort.

At the preliminary hearing, the Civil Court, without waiting for any submission of answers by the defendants, took the view that since the disputed area had not been declared to be an environmental protection zone by Ministerial Regulation, as required by Section 43 of the NEQA and according to the plaintiffs' documentary submission, it was admitted that the disputed area was under the responsibility and the ownership of the Royal Estate Office, the area could not be regarded as a public property. Even if it were public property which had been subject to common use by the people, the State was entitled to change its use for specific purposes. Therefore, the Cabinet Decision of 10 September 1992 did not violate or contravene the law and thus there were no grounds for the Court to decide for the plaintiffs on Counts 1 and 2.

In considering the charges in Count 2, which stated that the OEPP, a governmental agency under the second defendant's supervision, failed to propose to the NEB, as had been requested by the plaintiffs, that it should declare the disputed area to be an environmental protection zone, the Court had to decide whether the OEPP was under a duty to propose the matter the plaintiffs demanded and whether the second defendant could be held responsible for its failure to do so. The Civil Court considered these to be questions of fact. It was of the opinion that although the NEB, of which the first defendant was the chairman and an *ex officio* committee member, had the power to declare the disputed area to be an environmental protection zone, since the OEPP had not put forward this proposal to the NEB as requested by the plaintiffs, the committee members and the first defendant could not be held to have breached any right which might be said to be held by the plaintiffs.

As regards another request made at the end of Count 2 concerning the details which the plaintiffs argued had to be taken into account in submitting the matter to the NEB, the Court considered this to be within the OEPP's administrative power, and that thus it could not be enforced by the Court.

Finally, with respect to the plaintiffs' claim under Count 4 concerning the right to be provided with information by governmental authorities in accordance with Article 6 (1) of the NEQA 1992, the Court took the view that there was no provision in the NEQA or any other law which precisely specified the duties that the State owed to persons claiming such a right In addition, minutes of official meetings, decisions and their details did not fall within the scope of the definition of the "information" which had to be disclosed to the public.

Therefore, the Civil Court decided to dismiss the case against the first and the third defendants. Only the claims under Counts 2 (first part) and 5 against the second defendant could be admitted for further consideration.

The plaintiffs appealed.

On appeal, the plaintiffs contested the Civil Court's decisions on both questions of fact and law. On the questions of fact, the plaintiffs submitted that, although the disputed area had not been declared to be an environmental protection zone in accordance with Section 43 of the NEQA 1992, the plaintiffs had made a clear case that the area had original natural characters which met all the requirements of Section 43 and thus the first and the second defendants were obligated by law to issue a Ministerial Regulation to declare the area to be an environmental protection zone. As the three defendants themselves had never rejected the claim that the area should be so classified, it constituted

a violation of civil procedural law for the Civil Court to decide that the Cabinet Decision of 10 September 1992 did not contravene the law without hearing the defendants' answers and the evidence from the parties first. As long as evidence had not been introduced to establish whether the disputed area met the requirements so that the first and second defendants were obligated to declare it to be an environmental protection zone, the Cabinet Decision of 10 September 1992, which permitted the third defendant and the Public Relations Department to construct governmental buildings on it, was clearly in violation of Sections 43 and 97 of the NEQA. This was because the Decision which authorised construction activities in the area would directly have a destructive effect on its natural resources and environment, an effect which contravened the object and purpose of the NEQA, as enunciated in Sections 43, 44 and 97. The Cabinet Decision of 10 September 1992, was therefore, clearly unlawful, there was no need to wait for a Ministerial Regulation to be enacted as decided by the Civil Court. In addition, in the plaintiffs' pleadings, it had been clearly stated that there had been a prior Cabinet Decision of 29 August 1989 which required the area to be preserved for rain water drainage and storage in order to prevent flooding in the communities where the plaintiffs and other citizens resided This prior Cabinet Decision provided evidence that indicated that the disputed area was a public property for communal use within the meaning of Section 1304 of the Civil and Commercial Code and that it did have the natural conditions which make it worthy of preservation and conservation for common use as required by Sections 43-44 of the NEQA. As for the contention that the plaintiffs had admitted that the area was under the responsibility and ownership of the Royal Estate Office, and thus not a public property, the plaintiffs submitted that the Civil Court had erred in its findings on the facts because the admission was not an admission made by the plaintiffs in their pleadings, but a statement made by the Environment Law Centre Foundation, a legal person which was not a party to this case. Although the first plaintiff was the administrative director of the Foundation, the statement did not bind him since he was suing in his personal capacity and acting as the representative of the remaining six plaintiffs, who were by no means involved in the issuance of the statement and could not be said to be bound by it.

In any event, the seven plaintiffs had submitted as the main argument in their pleadings that the disputed area was qualified as a public property because it had been commonly used for a long time by the plaintiffs and other people in the adjacent areas In particular, it served as a green space and "lung" for the local communities in Payathai District, which enabled the people in the surrounding areas to enjoy pure and clean air, and a good quality of life free from pollution and nuisance. It also provided rain water drainage, which protected the communities from flooding, and natural habitats for animals and plants which were of recreational values. For these reasons, the plaintiffs submitted that the disputed area had become a public property, no matter whether or not there existed an official registration of ownership by any person. In deciding that the disputed area belonged to the Royal Estate Office without hearing the plaintiffs' evidence to prove whether or not the plaintiffs and other people living in the nearby areas had actually enjoyed the common use of the area as claimed by the plaintiffs, the Civil Court had erred entirely in its findings on both the grounds of fact and law since, according to Sections 8 (1) and 8 bis of the Land Code, it is clearly provided that a withdrawal or transfer of a public property commonly enjoyed by citizens could only be done by a specific Act of Parliament. Similarly in the case of changing the use of a public property for any specific official purpose, Section 8 bis clearly provided that there had first to be a withdrawal of its public property status in accordance with Section 8 (1). Therefore, the Cabinet

Decision of 10 September 1992, which allowed the third defendant and the Public Relations Department to construct governmental buildings in the area without a prior withdrawal of its status as a public property as required by law, amounted to a clear violation of Sections 8 (1) and 8 bis of the Land Code. It was thus appropriate for the Court of Appeal to nullify this Cabinet Decision as requested by the plaintiffs in Count 1.

Apart from constituting a violation the law, as mentioned above, the Cabinet Decision of 10 September 1992 also infringed a Municipal Regulation of the Bangkok Municipality concerning designation of areas within which construction of certain types of buildings was prohibited (No.5), B E 2505 (1962), authorised by Section 15 of the Building Planning Act B E 2479 (1936), which is still in force. This Municipal Regulation prohibited construction of any building except residential buildings or buildings which form part thereof within the zone as designated in the map annexed to the Regulation. The Cabinet Decision which permitted the third defendant and the Public Relations Department to construct governmental buildings within the disputed area which formed part of the said prohibited zone was therefore unlawful because the government buildings of the third defendant and the Public Relations Department were not residential buildings or buildings forming part thereof within the meaning of the Municipal Regulation. In addition, according to the Bangkok city plan laid down by Ministerial Regulation No 116 B E. 2535 (1992), as authorised by the Town Planning Act B E. 2518 (1975), the disputed area was not designated as a zone for constructing governmental buildings. Only the site where the Finance Ministry was at present located, which was an area adjacent to the disputed area, is designated as a governmental buildings zone For these reasons, the disputed area could not be lawfully used for such a purpose, the Cabinet Decision of 10 September 1992 was deemed to be unlawful because it infringed the Ministerial Regulation No. 116 above

The plaintiffs had brought the present case against the three defendants in order that the Court might exercise its judicial power to review the decision-making process of the Executive which has a direct effect on rights and duties of the public with regard to the protection, promotion and conservation of environmental quality and natural resources. Thus, by nature of the claims and the remedies requested, the present case could be classified as an administrative law case according to present judicial practice In other words, according to the present practice, a Court of law had jurisdiction in adjudicating cases involving acts of public authorities by virtue of acting as an administrative court in the absence of the existence of such a court in the Thai judicial system at present In general, until such a court has been established, a court of justice would have jurisdiction to adjudicate cases involving use of the Executive powers and administrative acts of governmental agencies which adversely affect "public rights" of people who are entitled to them by law.

As far as the present case was concerned, the essential part of the plaintiffs' claims against the defendants lay in the fact that the three defendants, in their exercise of executive power through governmental agencies, had acted or omitted to act in such a way as, as alleged by the plaintiffs, directly to have an adverse effect on the rights and duties of the plaintiffs and the public concerning the preservation, promotion and conservation of environmental quality and natural resources in the disputed area. The defendants' acts were considered by the plaintiffs to have infringed the "public rights" of the plaintiffs and all other Thai citizens. It was necessary for the plaintiffs to resort to judicial proceedings as they had sufferred special damage in order to enable the Court to exercise its judicial power to review the defendants' administrative acts, and to provide

remedies for the damage to the plaintiffs' public rights caused by the defendants' acts. The public rights which have been violated by the defendants are as follows :

1. The right and duty relating to conservation of natural resources and the environment as provided in Section 58 of the 1991 Constitution.

2. The right and duty to participate in the promotion and conservation of environmental quality as provided in Sections 6-8 of the 1992 NEQA.

3. The right to clean and pure air conducive to good health and quality of life

4. The right to recreational values characteristic of the ecosystem of the disputed area.

5. The right to be free from damage and nuisance resulting from flooding.

6. The right to be free from nuisance resulting from

(1) traffic jams

(2) pollution from air, noise, dust and smoke emitted from vehicles and construction activities of governmental buildings of the third defendant's Department and that of other governmental departments in the disputed area.

(3) heat ventilated from high buildings and air-conditioners installed in the third defendant's building

7. The right to be free from visual pollution caused by high buildings in the disputed area.

The "public rights" of the plaintiffs and other citizens in the adjacent areas emanated from the preservation of the disputed area as a green space and wetland which served as the "lung" of the communities surrounding it. It has been commonly used as a public property entitled to protection according to Section 1304 of the Civil and Commercial Code and Sections 43, 44 and 97 of the NEQA. This status of the disputed area and the public rights in its common use had been confirmed by the Cabinet Decision of 29 August 1989, the Bangkok Municipal Regulation on designation of zones where certain types of buildings are prohibited (No.5) B.E. 2505, and Ministerial Regulation No.116 (B E.2535) authorised by the Town Planning Act B.E.2518, as stated in the above appeal.

It can be concluded that the Civil Court did not take into account these arguments in its decision dismissing the plaintiffs' claims, a decision which was equivalent to admitting that the Thai judiciary has no jurisdiction over the case as an Administrative Court would have had. This decision was contrary to present practice which is based on the general understanding that a Court of Justice does have jurisdiction in cases which have been judicially classified as raising points of administrative law The plaintiffs argued, therefore, that the Civil Court should have admitted the case against the first and third defendants, and accepted for further consideration the plaintiffs' claims as set out in Counts 1, 2 (in the final part), 3, and 4 of the plaintiffs' pleadings. Otherwise, the plaintiffs and other citizens affected would have no means of attaining access to legal remedies through administraive law procedure since at present no administrative court has been established in Thailand. In addition, the fact that the Civil Court dismissed the case against the first defendant who was the Prime Minister and the chairman of the NEB, in effect nullified the implementation of environmental laws as a whole, and elevated both the Prime Minister's and the Cabinet's Decisions to a status superior to that of acts of the Legislative. This was the effect derived from the fact that no organization or institution existed which had the power to review or invalidate an unlawful administrative act adversely affecting the environment in the event that a Court of Justice refused to exercise this function. As chairman *ex officio* of the NEB, the first defendant had the direct responsibility to overview the situation and ensure that the law was fully

implemented As the first defendant had received a letter from the Environmental Law Centre Foundation which stated clearly that the matter had been proposed to the OEPP and that the latter had failed to respond to the request to consider it, this should have constituted sufficient ground for the first defendant to act without any necessity of waiting for the OEPP actually to submit the matter. The failure on the part of the first defendant to exercise his power to implement the law, as required by the 1992 NEQA, was clearly amounted to an omission to perform his official duty, and since such omission had had detrimental effects on the plaintiffs' and other affected citizens' public rights, it also constituted a wrongful administrative act against the latter who suffered special damage as a result. For these reasons, it could be argued that the first defendant had contravened the latter's public rights and that it would have been appropriate for the Civil Court to have admitted the action against the first defendant for further trial on the same ground as it had already admitted the action concerning the second defendant.

Finally, so far as the Civil Court's decision to dismiss the plaintiffs' claim in Count 4 on the ground that the 1992 NEQA and other related legislation did not specify how and what duties the State had towards plaintiffs claiming the right to environmental information, as provided by Section 6 (1) of the NEQA, the plaintiffs submitted that in the interpretation of this law, it should be clearly implied that if the law provides for such a right, the State and its agencies should be deemed to have a duty to disclose the information requested by its citizens, except where there are specific laws providing that the information requested constituted an official secret. Thus there is no need for the law to specify in detail the duties that the State and its agencies owe to the public. When Thai citizens, in the exercise of their right, request such information it was the duty of the State to provide it by all possible means so that such a right could be effectively guaranteed Otherwise, all the citizen's rights accorded by law would be void because it would always be possible for the State to claim that it did not know what specific duties it owed to its citizens. As for the Civil Court's decision that minutes of meetings and decisions taken at such meetings were not included within the definition of "information" which the State was required to disclose, the plaintiffs submitted that the information which the plaintiffs had requested from the second and third defendants was limited to that concerning the building projects of the third defendant's governmental building, the Public Relations building and any other buildings. In particular, the plaintiffs wanted to know how the building projects would proceed because they were concerned about the extent of the adverse impact that such activities would have on both the natural environment and the resources within the disputed area. So long as no such information was provided, there was no way for the plaintiffs to ascertain whether or not the projects in issue would cause environmental damage in the area, or what preventive measures had been taken by the Government to avoid and rectify any damage to its environmental quality. This necessary information was available only in the minutes of meetings of the governmental agencies concerned as it involved studying the environmental impacts which the projects might have, and suggestions made to various committees, including the NEB and the Cabinet as a basis for their decision. This kind of information did not fall within the scope of that deemed by Section 6 (1) of the NEQA to be an official secret and thus not disclosable.

For the reasons stated in this appeal, the plaintiffs requested that the Court of Appeal : overrule and reverse the decision of the Civil Court, which had dismissed the plaintiffs' complaints against the first and third defendants, as well as the claims stated in Counts 1, 2 (the latter part), 3 and 4; order the Civil Court to admit all the plaintiffs' complaints and claims for further trial, and order the first and third defendant to pay the costs incurred by the plaintiffs in this case

During the appeal, the plaintiffs were joined as complainants in the case by the eighth to thirty-sixth plaintiffs; and this request having been granted by the Court on 15 August 1994.

In its judgment, the Court of Appeal admitted the plaintiffs' complaints against the second and the third defendants with regard to the latter's claim to a right to information (Count 4). Except for this, all the other rulings of the Civil Court were upheld The parties were also ordered to pay for their own costs The plaintiffs then appealed to the Supreme Court (Dika Court) where, at the time of writing, the case is still pending.

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